MARCH 1961

Traffic Safety

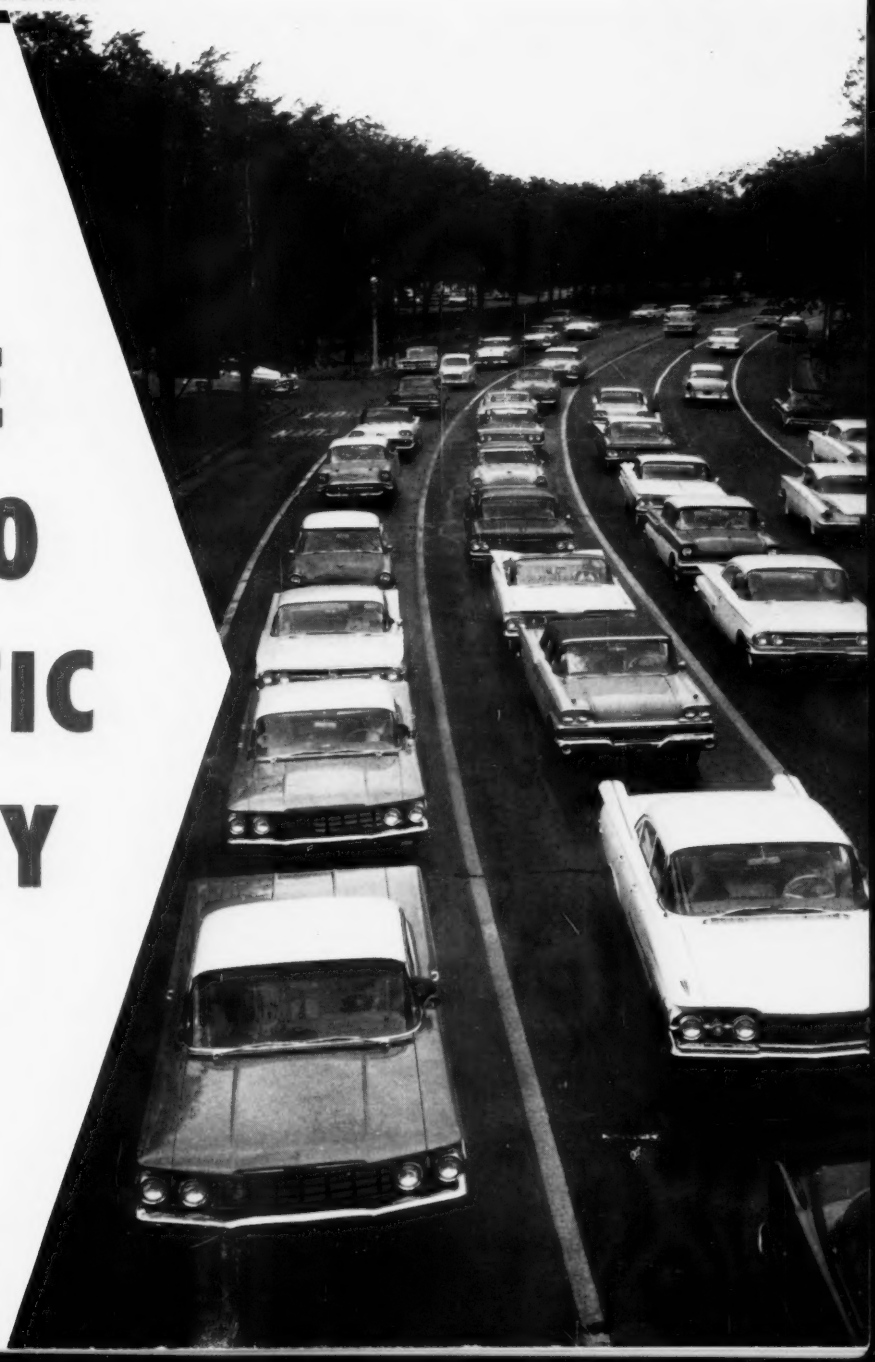
A NATIONAL SAFETY COUNCIL PUBLICATION

"The Great Holiday Massacre"

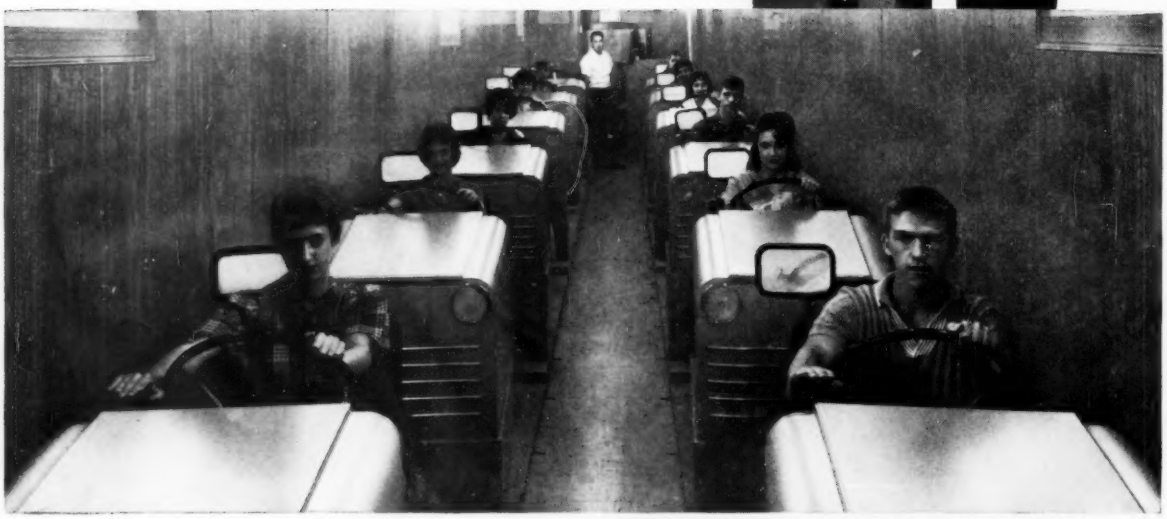
A STUDY OF IMPACT

— Page 12

THE 1960 TRAFFIC STORY



What Wichita's doing to improve driver education



Over 1000 students at five schools in Wichita, Kansas, take part of their course in driver training behind the wheel of a precision electromechanical simulator that provides better instruction and saves almost $28,000 annually. The Aetna Drivotrainer system, made by Rockwell Manufacturing Company, is comprised of stationary "cars" equipped with all essential instruments and controls; a film projector, screen and series of specially prepared movies; and a recording unit which automatically scores individual student reactions.

School officials credit the Drivotrainer system with four major teaching advantages: *Realism*—films depict specific driving problems the average driver encounters daily. *Comprehensiveness*—only a lifetime of driving could duplicate the variety of regular and emergency driving situations covered by the 21 films. *Feedback principle*—individual scoring quickly determines areas of weakness, permits immediate corrective action. *Better Attitudes*—proper attitudes towards safe driving and regulations can be developed, made part of acceptable group standards.

Two 55-foot trailers, equipped with 12 "cars" each, permit flexibility in extending the program to five high schools. At a cost of about $7000 each, these classrooms replace an estimated $135,000 in classroom equipment and buildings.

Economics of Drivotrainer. Giving 12 students 8 hours of behind-the-wheel instruction requires 96 teaching hours. Through the use of Drivotrainer, this is reduced to 48—or 4 hours per student. At $6.00 an hour, this represents a savings of $24,000 in time needed to instruct 1000 students. Because the number of dual control automobiles needed has been reduced from 14 to 7, an additional $3500 is saved in operation and maintenance costs.

Get the Full Story. Find out how the Drivotrainer system can make a substantial contribution to the driver education program in your community. Facts, figures, specifications and photos of typical installations (permanent and mobile) FREE; write: Rockwell Manufacturing Company, Drivotrainer Division, 19C North Lexington Ave., Pittsburgh 8, Pennsylvania.

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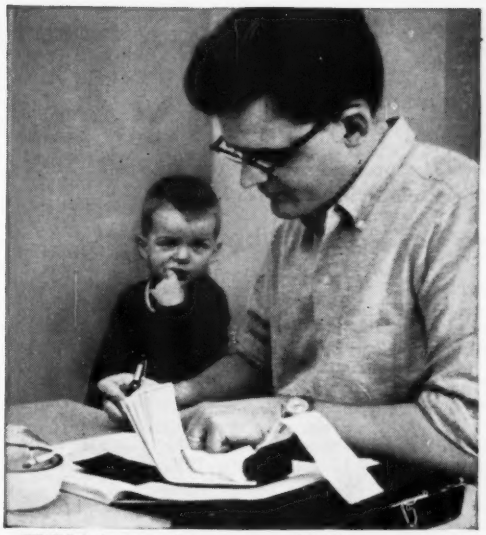

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Accidents

Automobile accidents and autopsy protocol: some reflections of a forensic pathologist. Charles E. Black. Reprint from Vol. 36, *Notre Dame Lawyer*, December, 1960, pp. 17-41.

How important a factor is health in accidents? Connecticut seeking the answer in a two year accident prevention study. John Newman. *Highway Highlights*, Nov.-Dec., 1960, pp. 18-19, 24. (Physical examinations plus questions on attitude.)

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Limitations on accident reconstruction. J. Stannard Baker. *Traffic Digest and Review*, December, 1960, pp. 20-33. (Reprinted from the *Defense Law Journal*, Vol. No. 8, 1960.)

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Enforcement

The Effects of Enforcement on Traffic Behavior. By the division of traffic operations, Bureau of Public Roads. Reported

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Traffic Safety

Volume 58 Number 3 March 1961

A NATIONAL SAFETY COUNCIL PUBLICATION

TRAFFIC SAFETY is dedicated to the prevention of traffic accidents through the presentation of objective information and responsible opinion to official agencies, public support groups and the motor transportation industry. The views expressed do not necessarily reflect the beliefs or policies of the National Safety Council, but they are presented in the conviction that the pressing social problem of traffic accidents can best be resolved through freedom of expression and open debate.

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BETWEEN STOPS

A RAPIDLY rising traffic toll in Japan has prompted enactment of new traffic laws.

When the laws were put into effect recently, the result was mass confusion. It seems the language of the laws was not clear, so the message didn't get through to the driver.

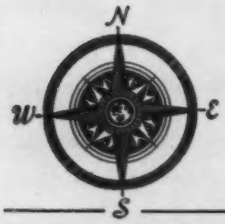
While we fare much better with our traffic laws in this country, we still fall down badly when it comes to getting the traffic safety message across to the man in the street. The annual traffic toll indicates that our reams of safety propaganda aren't operating on his wave length.

Experts say there will be no improvement until we find out what that wave length is.

A recent study of a specific traffic safety education program attempted to do just that.

In it, viewers and non-viewers of the TV program "The Great Holiday Massacre" were queried to determine the effects of the program on viewers' attitudes. The results were interesting and, to some extent, surprising.

The full story of the study is given in the article "A Study of Impact" on page 12 of this issue.



Today's Traffic

First come, first served

Not long ago an irate London driver called the police department demanding that they remove an elephant which was blocking a parking space in which he wished to park. When the police arrived they found the elephant, carrying a sign advertising a circus, parked correctly. Inspection of the meter showed the animal's parking fee had been paid. The officers ruled that the animal had a legal right to park and the motorist would have to find himself another parking space.

Prescription for lawyers

Dr. Murdock Head, chairman of George Washington University's Institute of Forensic Medicine, has recommended that judges and lawyers should study some medicine. He says that four law suits in five require some medical testimony, and most of the decisions turn on points of medicine rather than law.

Australian driving range

At Newcastle, Australia, plans are underway for a driving range for young people. Qualified driving instructors, under police supervision, will give the training—which will be offered in out-of-school hours. It will cover driving technique, traffic regulations and road safety. The 10 acre range will simulate all common driving conditions, such as hills, curves, crossroads and traffic lights. The range is the second of its kind in Australia.

Unusual suit

Damages of $260,000 have been awarded to a three year old South Carolina girl for brain injuries she received in an automobile accident before she was born. Federal Judge C. C. Wyche said he was convinced the child was severely and permanently injured when her mother was involved in an automobile collision which occurred three months prior to the girl's birth.

Here's another

Another unusual damage suit, filed in Stephensville, Tex., charged three year old Eddie Jones with reckless operation of his tricycle. According to the suit, "Little Eddie, who was on his tricycle, gathered a full head of steam and without a warning yell of any nature propelled his tricycle with great force into the body of Bertha Wolfe while her back was turned."

No respecter of persons

Two recent items in the news point up the traffic accident menace. Impersonator Mel Blanc, well known as the voice of Bugs Bunny in animated cartoons, suffered serious injuries in an auto accident. In another traffic accident Chester Williams, tackle on the Iowa football team, suffered injuries which may cost him his football future. One of Williams legs is paralyzed.

Japan has traffic troubles

The Japanese are taking to the road in droves. The number of automobiles is increasing at the rate of 40,000 monthly. Since 1947 the number has grown from 188,000 to 3,000,000. Some 318,093 accidents occurred from January through September last year, killing 8,347 persons and injuring 206,965.

THE 1960 TRAFFIC STORY

MOTOR VEHICLE deaths throughout the nation increased 1 per cent in 1960.

The death total was 38,200, almost 300 deaths more than the 1959 total of 37,910. Although the 1960 total was up for the second consecutive year, it was 1,400 deaths less than the highest death total recorded in the 1950's—a toll of 39,628 in 1956. It also was nearly 1,800 less than the record high of 39,969 in 1941.

For December alone, motor vehicle deaths totalled 3,520—a drop of 5 per cent from December 1959. Seven of the 12 months in 1960 showed increases over the same months in 1959, while five months had decreases.

The percentage increase in deaths in 1960 was only half as large as the 2 per cent increase in motor vehicle travel. Because of the smaller percentage increase in deaths, the mileage death rate decreased again to an all-time low of 5.3 (deaths per 100,000,000 vehicle miles). The rate in 1959 was 5.4. This was the fifth consecutive year that the mileage death rate had equalled that of the previous year or had reached a new record low.

In addition to the fatalities, 1960 motor vehicle accidents caused approximately 1,400,000 disabling injuries. These are injuries causing disability beyond the day of the accident, and do not include minor injuries which undoubtedly total millions more.

The value of property destroyed and damaged in 1960 motor vehicle accidents was estimated by the Council at $2,150,000,000. All costs—including wage loss, medical expense, overhead cost of insurance, and motor vehicle property damage—were $6,400,000,000.

Deaths by Type of Accident

Preliminary figures indicate that the sharpest increases in deaths in 1960 occurred in pedestrian accidents, railroad accidents, and non-collision accidents (running off roadway, overturning, etc.). Pedestrian accidents accounted for 100 more deaths, while deaths from railroad and non-collision accidents were up about 200 each. Collisions with animals showed a slight increase.

Increases did not occur, however, in all accident types. Deaths resulting from multi-vehicle collision accidents, street car, bicycle and fixed object accidents decreased.

Turn Page

Deaths by Type of Motor Vehicle Accident

Type	1960	1959	% Change
Multi-vehicle	14,800	14,900	— 1%
Non-collision	12,000	11,800	+ 2%
Pedestrian	7,950	7,850	+ 1%
Fixed object	1,500	1,600	— 6%
Railroad	1,400	1,202	+16%
Bicycle	450	480	— 6%
Animal	80	70	+14%
Street car	5	6	—17%
Total	38,200	37,910	+ 1%

Deaths by Age Groups

Deaths increased in all but one age group according to preliminary reports. The 25-44 age group had the only decrease, showing a drop of more than 150 deaths. The 0-4, and 45-64 age groups showed about a 50 death increase each, the 5-14 age group showed almost a 100 increase, while the 15-24 and the 65 and over age groups showed increases of about 150 each.

Age Group	1960	1959	% Change
0-4	1,900	1,842	+3%
5-14	2,800	2,719	+3%
15-24	9,100	8,969	+1%
25-44	10,200	10,358	—2%
45-64	8,300	8,263	+*%
65 and over	5,900	5,759	+2%
Total	38,200	37,910	+1%

*Less than .5%

Deaths by Urban and Rural Areas

A 6 per cent increase in urban deaths accounted for a 600 death increase in 1960 over 1959. This was partially offset by a 1 per cent decrease (300) in rural deaths, resulting in the nationwide increase of 300 deaths.

1960 Deaths by States and Cities

Among 48 reporting states for the month of December, 29 showed decreases, 17 increases and 2 no change. For the entire year, 20 states had decreases. These were:

Rhode Island	—36%
New Hampshire	—15%
Nebraska	—14%
Virginia	—11%
New Mexico	—11%
West Virginia	—10%
Montana	—10%
New York	— 9%
Iowa	— 9%

THE STATISTICS

DEATHS **38,200**

INJURIES **1,400,000**
(disabling beyond day of accident)

COSTS **$6,400,000,000**

TRAVEL **700,000,000,000**
(vehicle miles)

RATE **5.3**
(deaths per 100,000,000 miles of travel)

M. V. REGISTRATION **73,900,000**

POPULATION **180,000,000**

On the left are the facts on the traffic toll for 1960.

The cold, impersonal numbers give little idea of the pain and grief these accidents brought to the victims and their families.

The letter and picture on the right—reprinted from the *Rochester Times-Union* — eloquently tell the tragic story behind *ONE* traffic accident.

Multiply this story by the staggering numbers on the left and you begin to get some idea of the *real* toll of traffic accidents for one year.

Kansas	— 9%
Texas	— 8%
Nevada	— 8%
Oregon	— 6%
North Dakota	— 4%
Illinois	— 3%
New Jersey	— 3%
Maryland	— 2%
Arkansas	— 2%
Arizona	— 1%
Wyoming	— 1%

Of the 715 reporting cities in December, 149 had decreases in deaths, 449 reported no change, and 117 showed increases. For 12 months, 287 cities had decreases, 125 no change, and 303 increases.

The following cities of more than 200,000 population had fewer deaths for the 12 month period:

City	*Decrease in Per Cent*
Providence, R. I.	—63%
Miami, Fla.	—43%
Albuquerque, N. M.	—35%
Akron, Ohio	—33%
El Paso, Tex.	—31%
Oakland, Calif.	—26%
Boston, Mass.	—25%
Houston, Tex.	—21%
Atlanta, Ga.	—20%
Ft. Worth, Tex.	—19%
New York, N. Y.	—16%
Seattle, Wash.	—13%
Chicago, Ill.	—10%
San Diego, Calif.	—10%
Buffalo, N. Y.	—10%
Louisville, Ky.	— 8%
Cleveland, Ohio	— 7%
San Francisco, Calif.	— 7%
Tampa, Fla.	— 6%
Birmingham, Ala.	— 4%
Richmond, Va.	— 4%
Portland, Ore.	— 2%

In December, 500 of the cities had perfect records. Of these, the three largest were: Ft. Worth, Tex. (356,300), Springfield, Mass. (174,500) and Nashville, Tenn. (170,900).

For the entire year, 122 of the cities had perfect records, and of these the three largest were: Medford, Mass. (65,000), Passaic, N. J. (54,000) and University City, Mo. (51,200).

The three leading cities for the entire year in each popu-

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THE STORY OF ONE STATISTIC

To a Hit-Run Driver

Larry Burke came home from the hospital this week.

He's the 4-year-old boy who was left lying on Warwick Ave., with the full length of his skull laid open after your car hit him at 5:05 p.m. Dec. 19. You slowed your car a moment, then speeded up and drove away in the darkness.

Larry's parents, Mr. and Mrs. Joseph J. Burke of 86 Rugby Ave., thought you should see what happened to Larry as a result of the accident. Larry is going to live. He can see all right, too, even though his right eyeball socket was badly damaged.

He had "oh, so many fractures—everything from his little chin to the top of his head," his father said today. "The full length of his skull was laid open."

Larry was in surgery for six hours after the accident. He was on the danger list for long agonizing days at St. Mary's Hospital. Even now at home, he must stay in bed except for one hour in the morning and one hour in the afternoon.

A year from now, a plastic surgeon may be able to start obliterating those scars on Larry's face.

When he reaches full growth—when he's about 19—doctors will be able to rebuild his right eye socket. That means Larry is facing surgery at least until 1975 because of what happened at 5:05 p.m. Dec. 19.

That's the report on Larry. What about you, his unknown assailant?

Larry Burke

THE NATIONAL ACCIDENT FATALITY TOLL

	1960	1959	Change
ALL ACCIDENTS	93,000	92,080	+1%
Motor-vehicle	38,200	37,910	+1%
Public non-motor-vehicle	16,500	16,500	0%
Home	27,500	27,000	+2%
Work	13,800	13,800	0%

Note: The motor-vehicle totals include some deaths also included in work and home. This duplication amounted to about 3,000 in 1960 and 3,100 in 1959. The 1959 all-accident and motor-vehicle death totals are the official figures of the National Office of Vital Statistics; all others are National Safety Council estimates.

All Accidents

Killed—93,000, 1 per cent up from 1959.

Injured—9,300,000.

Cost—$13,400,000,000. Includes wage loss, medical expense, overhead cost of insurance for all accidents, interrupted production schedules, time lost by workers other than the injured, etc., due to work accidents and property damage in traffic accidents and fires.

Deaths of children under 5 years numbered approximately 1 per cent less than in 1959. Among children 5-14 years old the death total was up 4 per cent. Changes in adult groups were: 15-24 years, up 1 per cent; 25-44 years, no change; 45-64 years, up 2 per cent; 65-74 years, up 1 per cent; 75 years and older, no change.

Fatal falls numbered the same as in 1959—18,700; fires, burns went up 6 per cent to 7,300. Drownings were up 1 per cent at 6,500. Fatal firearms accidents went up 2 per cent to 2,300.

The 1960 death rate per 100,000 population was 51.7.

Work Accidents

Killed—13,800. This was the same as the 1959 total.

Injured—1,950,000, no change from 1959.

Cost—$4,200,000,000. Includes cost of interrupted production schedules, time lost by workers other than the injured, etc., as well as wage loss, medical expense and the overhead costs of insurance.

Total all-industry employment was about 2 per cent more than in 1959.

Railroad employee fatalities totalled 132 in the first nine months of 1960 up 19 from 1959. The nine-month injury total was 9,906 down 4 per cent from 1959.

There apparently was a decrease in the all-industry disabling injury rate.

Worker Accidents

Killed—43,600, up 300 from 1959. On job, 13,800; off job, 29,800.

Injured—4,300,000, up 1 per cent from 1959.

Time lost, including indirect, amounted to 280,000,000 man-days, equivalent to the shut-down of plants with more than 1,000,000 workers.

Public Accidents

(Not Motor Vehicle)

Killed—16,500—no change from 1959.

Injured—2,050,000.

Cost—$850,000,000.

Decreases occurred in the 0-4, 25-44 year and 75 and over age groups; increases in the 5-14 and 45-64 age groups; no change in the 15-24 and 65-74 age groups.

There were sizeable decreases in water transport and falls deaths in 1960. Increases were recorded for drowning and other specified fatalities.

Railroad Accidents

Nine-month death total—1,630 compared with 1,503 in 1959. Injuries numbered 14,336 compared with 14,769 in 1959.

Grade crossing deaths increased 18 per cent to 953 while injuries totalled 2,281, up 3 per cent.

Passenger deaths numbered 27, compared with 9 for the same months of 1959.

Trespasser deaths numbered 495, a decrease of 2 per cent from 1959.

Airplane Accidents

There were ten fatal accidents during 1960 in the domestic passenger-carrying operations of scheduled air carriers, in which 326 passengers and 37 crew members were killed. The passenger death rate per 100,000,000 passenger-miles, based on preliminary information, was 1.00.

Home Accidents

Killed—27,500. This was 500 more than in 1959.

Injured—4,000,000.

Cost—$950,000,000.

Decreases occurred in the 0-4 and 15-24 year age groups; no change in the 65-74 year age group; all other age groups recorded increases.

There were increases in deaths from solid and liquid poisonings, fires, burns and firearms. Deaths from falls and poison gases did not change. Mechanical suffocation deaths decreased.

Fire Losses

The value of property destroyed by fire in 1960 was $1,108,000,000, or 6 per cent more than in 1959.

Test Talk

Potent fumes

Here's a new excuse for erratic driving. In California, a young man recently pleaded guilty to driving while under the influence of glue. He admitted to having inhaled fumes from some glue which apparently impaired his driving ability and led to his arrest.

Public takes hand

Public cooperation has helped the Iowa State Highway Patrol apprehend more drunk drivers in 1960, according to state records. Chief David Herrick reports that the number of persons turning in drunk drivers and willing to testify against them has increased appreciably. Says Herrick: "It used to be that a driver following a drunk would seek his chance to get around, then go on and forget it. Now, more citizens are calling our patrol or the sheriff. It's the kind of cooperation we need."

Clear cut case

Even the most enthusiastic proponents of chemical tests would agree that a recent test — given to a driver involved in an accident in Savannah, Ga.— wasn't really necessary. The driver was so tipsy that the machine registered a blood alcohol reading of 0.40 per cent.

Indiana studies laws

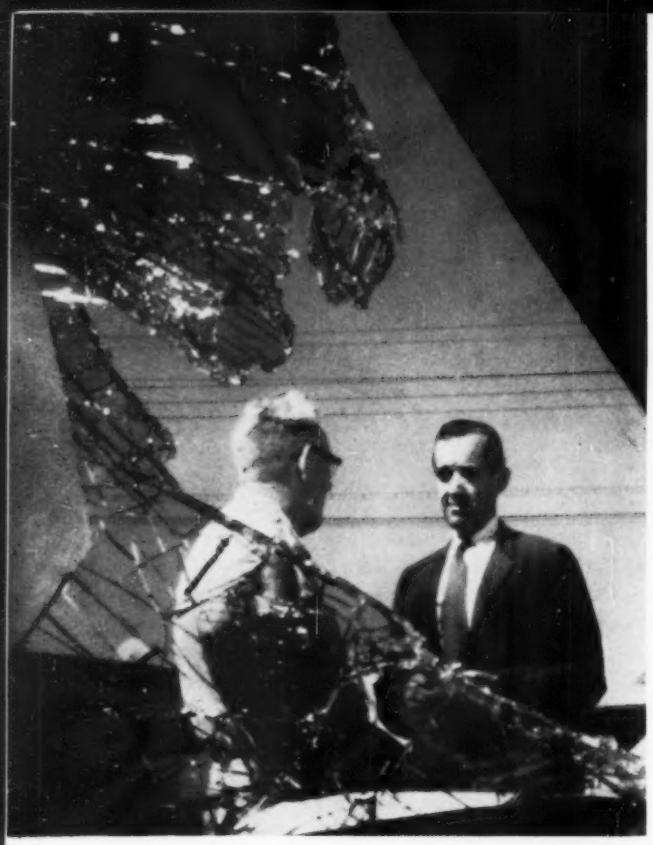
In Indiana, the Governor's Traffic Safety Study Commission has studied existing laws on driving while under the influence and it is expected that revisions in the laws may be proposed to the legislature as a result of the findings. A possibility is that a new criminal charge will be introduced to cover drivers under the influence of alcohol or narcotics who become involved in fatal accidents and are not covered under "reckless homicide."

No place to hide

A New Jersey Appellate Court upheld a conviction of drunken driving in a parking lot area. The defendant had appealed to the court on the grounds that the state law prohibits drunken driving only on the public highways. The court said, ". . . the legislation regards an intoxicated driver as a menace and . . . the legislative intent includes a ban on the operation of a motor vehicle in a place devoted to public use as is here involved."

Seeing's believing

Some agencies report good results from courtroom use of sound movies and tape recordings made of drunk driving suspects following the accidents in which they are involved. The movies and tapes help offset the later sober and respectable appearance these individuals often make in court. They are especially useful in cases which come to court as long as a year after arrest.



"The Great Holiday Massacre"

A STUDY OF IMPACT

Public reaction to TV documentary throws new light on safety propaganda

by John Naisbitt

THE full weight of the CBS Television Network and Edward R. Murrow punched out a dramatic, hard-hitting, 60 minutes of safety propaganda Monday evening, December 26, but the hardest punch of all was landed by two drunks who were on camera for less than three minutes.

A nationwide research project sponsored by the National Safety Council and centered around *CBS Reports*' "The Great Holiday Massacre" disclosed this and other unanticipated insights into the effects of safety propaganda.

("Propaganda" is here used in the social science sense of an organized effort to persuade people to accept an idea or course of action; it can be "good" or "bad" depending on how successful it is in accomplishing its goal: better drivers, fewer accidents.)

There is little or no research-based information on the effectiveness of safety propaganda. "The Great Holiday Massacre" was a powerful example of such propaganda, and the National Safety Council took advantage of this by putting the tools of social research to work in an effort to determine the effect on the people who watched it.

Creative Research Associates, Inc. of Chicago was engaged to conduct a study among 600 families in the metropolitan areas of Atlanta, Boston, Chicago and Los Angeles.

Each person was interviewed for approximately one-half hour in the five day period before the *CBS Reports* program, then re-interviewed within a five day period after the program. The before and after interviews, aimed at determining attitudes toward traffic safety, were identical in nature.

The study was designed to discover changes in attitudes and awareness brought about by *CBS Reports* as indicated by the changes from the before-interview to the after-interview.

The final sample consisted of before and after interviews with:

—401 *non-viewers* of *CBS Reports*
—188 *viewers* of *CBS Reports*

If, then, the viewers' attitudes changed and those of the non-viewers (the control group) did not, the changes could be attributed to the effects of the television program.

Because the program itself was a documentary based on accidents that occurred during the 1960 Labor Day weekend, people were asked questions to determine how they feel about driving conditions on a holiday weekend.

They tend to feel holiday weekends are dangerous.

The following table indicates this. It indicates the levels

John Naisbitt is director of public information, National Safety Council.

of anxiety regarding holiday weekends held by the 589 people (viewers and non-viewers) in the sample.

Very Safe	Fairly Safe	Fairly Dangerous	Very Dangerous
1%	23%	42%	34%

A man in Boston who thought holiday weekends are "very dangerous": "The roads get so crowded and cluttered it's hard to keep an even keel. You're better off staying off the highway altogether."

On the other hand, a woman on the West Coast felt that holiday weekends are "fairly safe": "If you just pay attention to the road and mind your own business, you won't get into trouble."

Drivers came into this study with a variety of attitudes and feelings about holiday weekends.

This was before the program.

Now, we might expect that a television program devoted to dangers of holiday weekend driving would increase anxiety and result in more people thinking it was more dangerous. What happened? Here are the before and after results of those who *viewed* the program:

Viewers

	Very Safe	Fairly Safe	Fairly Dangerous	Very Dangerous
Before *CBS Reports*	1%	21%	41%	37%
After *CBS Reports*	2%	31%	33%	34%

The effect of viewing the program was to *decrease* the anxiety level from the "fairly" and "very" dangerous categories toward the more moderate level of anxiety expressed as "fairly safe."

The attitudes of the non-viewers, or "control" group, remained stable:

Non-Viewers

	Very Safe	Fairly Safe	Fairly Dangerous	Very Dangerous
Before *CBS Reports*	1%	24%	44%	31%
After *CBS Reports*	2%	26%	43%	29%

Presumably, the only difference between these two groups is that one group saw "The Great Holiday Massacre." Why, then, was there a shift toward attitudes of greater safety about holiday weekends among those who saw the program? The cause of this change will be dealt with shortly.

The above tables deal with how "dangerous" or "safe" people feel holiday weekend driving is. How do they feel about actually taking automobile trips on holiday weekends?

Are they *fearful* to the point of refraining from driving?

Are they appropriately *cautious, yet realistic* enough to take such trips?

Do they *deny* concern for safety and make impulsive decisions to drive under even difficult conditions?

Creative Research Associates designed a set of attitudinal questions to discover basic behavior types in the sample: Phobic, realistic, counter-phobic. They might have been called fearful, realistic, and cocky. These three types are defined as follows:

"Phobic": Total abstinence from driving on holiday weekends. These are the people who have a phobia about driving.

"Realistic": With proper precautions, one drives on holiday weekends. These are the people who have a balanced, mature outlook regarding the subject.

"Counter-phobic": Denial of fears for safety, resulting in driving on holiday weekends under even severe conditions. These are the people who whistle in the dark.

The total sample distributed itself among these types in this way:

Behavior-Attitude Types

Phobic (Fearful)	Realistic	Counter-Phobic (Cocky)
35%	44%	21%

Typically, people in these three groups feel this way about taking trips on holiday weekends:

Phobic: "I would forget about the visit at this time. Why take foolish chances?"

Realistic: "I'd check on traffic conditions and unless there were unusual problems, I'd go."

Counter-Phobic: "Why be concerned all the time about dangers? Accidents happen all the time, so why worry? I'd go and enjoy myself."

More people (44 per cent) tend to be realistic, but the extreme groups are sizeable.

Turn Page

Edward R. Murrow (left) gets an official's reaction to the traffic problem when he interviews Comm. Leo J. Mulcahy of the Connecticut State Police—who believes in stern measures.

How did the program affect the viewer's attitude toward driving? A comparison with the non-viewers was made.

Effect of CBS Reports on Attitude Toward Driving Among Viewers

	Phobic (Fearful)	Realistic	Counter-Phobic (Cocky)
Before *CBS Reports*	37%	44%	19%
After *CBS Reports*	33%	51%	16%

Among Non-Viewers

	Phobic (Fearful)	Realistic	Counter-Phobic (Cocky)
Before *CBS Reports*	33%	44%	23%
After *CBS Reports*	31%	47%	22%

The non-viewers remain relatively constant, but the viewer group tends to shift moderately from phobic and counter-phobic attitudes to realistic attitudes. This parallels the previous shift noted from "very dangerous" and "fairly dangerous" to "fairly safe."

Why do these shifts toward a lesser degree of anxiety, rather than toward a greater degree of anxiety, occur among those who viewed a program that we might have hypothesized to be anxiety provoking?

We might have thought that such a program would just "scare" people and make them more nervous about driving. Apparently the effect of the program was to make people less fearful and more realistic. This is a surprising result. What caused it?

To begin to answer this question, let us look at the *reasons* normally given for considering holiday weekends dangerous. These are the reasons given before seeing the program by those who felt holiday weekends to be "very dangerous":

1) Number of cars on the road increases.

2) General carelessness of drivers.

3) General human error.

4) Abundance of inexperienced drivers.

A teenager in Los Angeles: "When school is off, and everybody's got a holiday coming, you can imagine everybody pulling out of town and going to the beaches and having fun. The place (the road) is hopping with cars and everybody's relaxed for a good time. It's rough on driving."

A woman in Atlanta: "People are not alerted enough to the dangers on the road. Most drivers I notice on the roads are not so careful that I would trust their judgment."

These reasons are rather general and abstract. They are *non-specific.* What the program appears to have done is to specify the source of danger for those who were just generally and vaguely anxious in their attitude about safety. What was this source of danger?

Here is where the two drunks come in.

If a noise in the dark makes you vaguely apprehensive and you later discover the cat is bounding around the house, your level of anxiety goes down. In somewhat the same manner those who felt holiday driving was "very dangerous" but could give only vague, general reasons, "identified" the source of danger (drunks) and their level of anxiety went down (they don't consider themselves drunkards).

Though the two drunks were on camera for just a few minutes, it was a highly dramatic sequence (patrolmen stopping a car and interrogating the two obviously intoxicated occupants) and the psychological impact was substantial.

("Alcoholic" and "alcoholism" are used in the study as collective terms for such responses as "drunks," "inebriates," or, as one lady in Boston put it, "those two characters.")

There is a significantly greater increase of those who say, after viewing *CBS Reports,* that danger is due to alcoholic drivers. Among those viewers who typically believe holiday weekend driving is "very dangerous," those who cited alcoholic drivers as a danger jumped from 12 per cent to 25 per cent after viewing the program.

Moreover, for the *entire* viewing group, alcoholism as a cited dynamic cause of hazards on both regular and holiday weekends appears to be significantly increased as a result of the *CBS Reports* program. Among all the viewers in our sample, there are the following increases in spontaneous citing of alcoholism as a regular weekend and holiday weekend hazard:

Increase of Alcoholism as a Cited Driving Hazard Among Viewers

	Regular Weekend	Holiday Weekend
Before *CBS Reports*	21%	36%
After *CBS Reports*	39%	53%

A man in Atlanta: "The roads would be much safer if we got rid of the people who drank so much. You can spot them from a distance. They don't make good judgments, they weave, and they'll get themselves killed."

A woman in Pasadena: "You sometimes wonder how these drunks survive a weekend. They don't know what they're doing. Driving with liquor in you is a stupid thing to do."

Increase of Alcoholism as a Cited Driving Hazard Among Non-Viewers

	Regular Weekend	Holiday Weekend
Before *CBS Reports*	25%	44%
After *CBS Reports*	29%	48%

No other reason cited for weekend hazards shows the same significance of increase as a result of viewing the program as did alcoholism.

At this point we can say that *CBS Reports*' "The Great Holiday Massacre":

1) Influenced the viewer toward a more *reasonable* at-

titude about the dangers of driving. This we would say is good, but in doing so the effect of *CBS Reports* was to:

2) Place the burden of danger on too simple and specific a cause, allowing anxious drivers (who generalized their own fearfulness into many vague causes) to externalize the danger onto the "drunk driver." It got them off an emotional hook.

These two points have interesting implications in terms of effective safety propaganda in general. We will return to them later.

Attitudes Toward Prevention

One area of influence which hopefully can be a function of safety propaganda deals with an awareness on the part of the individual driver of how he may *prevent* serious accidents. Each respondent was asked how he might help "cut down" accidents. Analysis of the before and after *CBS Reports* responses among *viewers* indicates two categories of prevention that *change*:

1) There is a 5 per cent increase of those who *spontaneously* cite "safety belt" as a preventive device (people seem to view safety belts in a general preventive category, rather than being specifically death and injury reducing). This increase might be viewed as low considering the heavy emphasis given seat belts on the program.

2) There is a 5 per cent increase of those who spontaneously cite "enactment of safety laws" as a preventive measure.

There is no such increase in these preventive categories from before and after interviews among *non-viewers*.

Among *all* respondents in the sample these ways of cited prevention remain stable and almost universal:

—be careful
—obey traffic rules
—help police enforce traffic laws

Here are some typical comments from individuals who give lip-service to these standard slogans:

A man in Highland Park, Ill.: "The only real prevention is to obey every traffic rule. There's no substitute for that."

A man in Los Angeles: "Caution is the most important prevention of accidents. A driver must always remember that accidents can be prevented, and being careful is the best way."

A woman in Cambridge, Mass.: "Never let a violator get away with it. If you see a man run through a red light, you should report his number to the police."

The *CBS Reports* program did not significantly increase or decrease awareness and understanding of these categories of prevention. *They have apparently become culturally ingrained and safety propaganda need not overelaborate on them.*

It will be pointed out later that other aspects of safety education may well be stressed.

Safety Belts

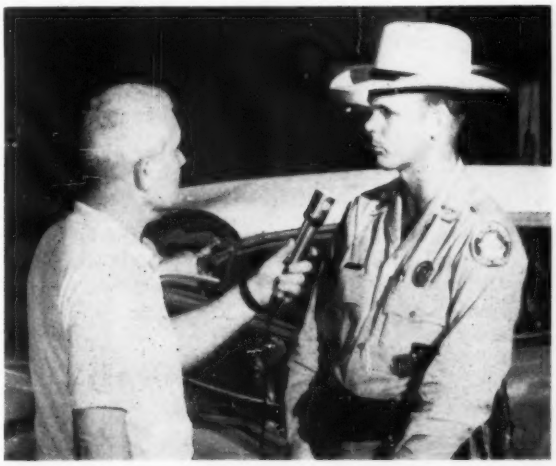
A *direct* assessment of the views of the sample concerning the value of safety belts was made. Each respondent was allowed to express his feelings about the value of

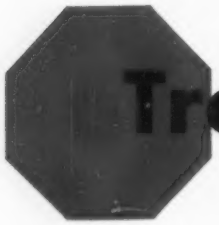
To Page 36

The trooper's-eye-view of the holiday weekend is reported by Harry Reasoner, CBS news correspondent, (center) as he accompanies Minnesota State Trooper Charles Reinetz on patrol duty.

Children's screams and wailing sirens mark the end of one family's holiday trip. Bill Stout, CBS news correspondent, (in straw hat) is on hand to bring story of tragic accident to TV audience.

In the picture below, Florida State Trooper William Flagg sounds off about the senseless slaughter to Bill Leonard, CBS news correspondent





Traffic Signs Updated

Revised manual sets standards, forms basis of uniformity in street and highway signing and marking

A LONG step toward greater standardization of traffic signs, signals and markings has been taken with the approval of a revised *Manual on Uniform Traffic Control Devices for Streets and Highways*, and with the announcement by the Bureau of Public Roads that only such devices as conform to the new manual will be approved for the federal-aid highway systems.

The new standards, updated from 1948, are contained in a manual drafted by the National Joint Committee on Uniform Traffic Control Devices, and recently approved by the committee's member organizations, the American Association of State Highway Officials, the Institute of Traffic Engineers, the National Committee on Uniform Traffic Laws and Ordinances, the American Municipal Association and the National Association of County Officials. The latter two organizations joined the National Joint Committee during the past year and are expected to lend added impetus to the modernization of traffic control devices throughout the nation.

The manual reflects widely accepted and time tested traffic control practices as well as the information provided by numerous studies dedicated to searching out the principles for safe and orderly movement of vehicles and pedestrians. First written in 1935, the manual has been revised periodically to prescribe refinements in the design and application of control devices so urgently needed for effective guidance and management of traffic.

This newest edition includes for the first time a major section dealing with standards for expressway signing, another on signing and marking for construction and maintenance operations, and a brief treatment of civil defense signing.

The Bureau of Public Roads actively assists the National Joint Committee in its work and has a responsible interest in seeing that the results are broadly applied. By existing federal highway legislation and the terms of an order of the Department of Commerce, the signs, signals and markings installed on highways constructed with federal funds (since December 20, 1944) are subject to approval by the state highway department with concurrence of the Federal Highway Administrator, who is directed to concur only in installations that promote safe, efficient highway use.

Replacement Time

Concurrence in the new manual was announced recently by outgoing Federal Highway Administrator Bertram D. Tallamy, who said: "As a matter of policy, the Bureau of Public Roads proposes to use its authority to approve, for the federal-aid highway systems, only such traffic control devices as will conform to the new manual. A reasonable time following the issuance of the revised standards will, of course, be allowed for the gradual replacement of any existing installations that may be made obsolete by the new manual."

A most significant feature of the new manual, in the opinion of many of the engineers who aided in its preparation, is that it eliminates many of the alternatives in traffic control devices that previously were permitted and substitutes a single standard.

A notable example of this is the stripe to mark "no passing" zones. In the future, according to the new manual, all such zones are to be marked with a yellow line to the right of the white center stripe. In the past some states used yellow and others used white.

Another case in which a single standard has been substituted for various options is in pedestrian signals. The new manual provides that pedestrian signals shall be rectangular in shape and that the messages they carry shall be limited to WALK and DON'T WALK.

Generally the sizes of traffic signs specified in the new manual are larger than those now commonly in use. This is to provide greater visibility, particularly on multi-lane highways where driving is at higher speeds. The new manual also specifies a standard size for signs rather than minimum sizes as was the case in the old manual.

An aid to night driving provided for in the new manual is the use of a white edge line to delineate the edge of the pavement from the shoulder. Such markings also will add to the safety and convenience of travel during fog or rain and will serve to keep heavy vehicles off the shoulder. Use of edge markings is on a permissive rather than mandatory basis.

The new manual calls attention to the desirability of making greater use of easily understood symbols on traffic signs in preference to word messages. It points out that such conventional symbols as the directional arrow, the curve arrow or the intersection diagram are instantly recognizable. The increasing exchange of international travel also makes more symbolization desirable as symbols are widely used in Europe and in Canada and Mexico. The Joint Committee which authored the manual calls for initiation of a program of research to determine the extent to which symbols can be used to advantage on traffic signs.

For freeways and expressways the new manual provides for larger and higher signs than for conventional roads and streets. It specifies the use of overhead signs in locations where heavy traffic, terrain or highway design features impair the visibility of signs located along the roadside. Also

provided for are reflectors on posts at regular intervals along the edge of the road to more clearly indicate the alignment of the highway at night.

The new manual provides for a solid white channelizing line to discourage lane changing on the part of drivers.

It continues the practice of reserving certain sign shapes for particular meanings, such as the octagon shape for STOP, the triangular shape for YIELD and the crossbuck for railroad crossings.

Many of the changes in the manual are technical in nature and relate to the conditions under which control devices should be employed by the officials responsible for traffic operations, and with the size and location of such devices. To the fullest extent possible the committee responsible for preparation of the manual sought to avoid drastic changes in existing sign, signal and marking practices that would create confusion for motorists.

Lane Controls

One innovation that may come into general use as a result of the new manual is a system of lane control signals on streets that have reversible unbalanced lane operation to favor the predominant traffic flow at peak hours. Such signals will facilitate unbalanced operations by notifying motorists which lanes are operating in-bound and which out-bound. The lane signals will be suspended overhead in each block of a city street. A green arrow will mean the particular lane is open to traffic and red "X" will mean it is closed.

The current nationwide highway modernization program will require detours around construction sites in many locations. As a protection to both motorists and workmen, the new manual contains an entire new section for traffic control devices at construction sites for use by state officials or by contractors as appropriate.

The current manual originated back in 1927 when the American Association of State Highway Officials drafted and published the first set of uniform standards for signs, signals and markings on rural highways. This was followed, in 1929, by the publication of a similar set of standards for application to urban streets by the National Conference on Street and Highway Safety. Later these two organizations combined their recommendations in a single manual, published in 1935.

To foster widest and earliest possible application of the new manual, the Bureau of Public Roads has stated that federal-aid funds may be used for sign modernization on a statewide or selected system basis. Funds may also be used for engineering studies to determine needed changes in signing practices. A pilot study of this type is now being carried on by the Iowa Highway Department.

The current edition of the manual sets forth the value of uniformity as follows:

"Uniformity of traffic control devices simplifies the task of the road user because it aids in instant recognition and understanding. It aids police, courts and road users by giving everyone the same interpretation. It aids public highway and traffic officials through economy in manufacture, installation, maintenance and administration.

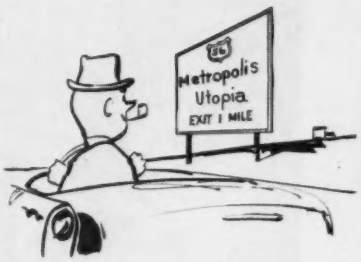
"Simply stated, uniformity means treating similar situations in the same way. The use of uniform traffic control devices does not, in itself, constitute uniformity. In fact, using a standard device where it is not appropriate is as objectionable as using a nonstandard device.

"The decision to use a particular device at a particular location must be made on the basis of an engineering study at the location."

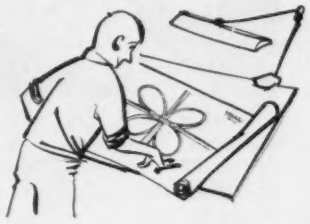
The National Joint Committee on Uniform Traffic Control Devices which had charge of preparation of the new manual is composed of seven representatives of the American Association of State Highway Officials, seven representatives of the Institute of Traffic Engineers, seven from the National Committee on Uniform Traffic Laws and Ordinances, and two each from the American Municipal Association and National Association of County Officials. Chairman is E. H. Holmes, assistant commissioner, U. S. Bureau of Public Roads.

Copies of the new *Manual on Uniform Traffic Control Devices for Streets and Highways* will be available to public officials, motorists and other interested persons from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., as soon as possible.

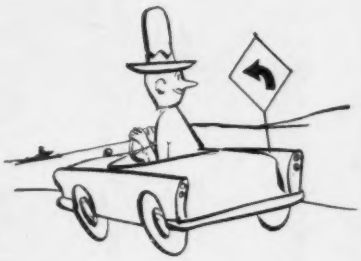
MANUAL RECOMMENDS . . .



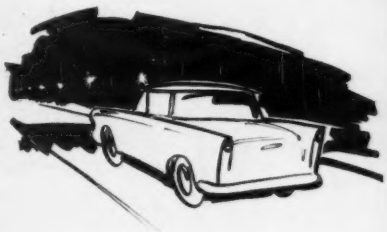
Larger signs for expressways



Standards for officials



Easily understood symbols



Reflectors at regular intervals

John C. Mackie, Michigan's highway commissioner, and Thomas Farrell, information officer, Michigan State Highway Department, explain department's operation to Paul Matlock, Michigan State University student. Visit was part of Matlock's field training.

MSU TRAINS TRAFFIC SAFETY SPECIALISTS

by Glenn M. Schultz

THEY'RE turning out a new brand of traffic safety career man at Michigan State University.

He is the product of a unique curriculum, planned to give him a broad knowledge of the many facets of traffic safety and an understanding of just how they should all combine to produce an effective whole.

This concept of "total traffic safety training" actually grew out of a series of those informal, after-meeting sessions so loved by the old pros of traffic safety.

"How did we get into traffic safety work? How did we get our training?" were questions often asked at these sessions.

The participants had come from a variety of fields, and they found that, usually, like Topsy, they "just grew" into their traffic safety jobs. They had learned their lessons the hard way—and they realized there was still much they needed to know.

Constructively, this led to another subject of discussion: *What kinds of training should be provided for the young people who will enter the field in the years ahead?*

The needs and opportunities for trained workers in traffic safety are apparent.

National safety organizations are expanding; more and more local safety organizations are being developed. Service in such groups demands both extensive training and a broad appreciation of the many aspects of the traffic safety problems.

Research people are needed, first to find out what needs to be known about traffic accidents and their causes; then to get the facts; finally to suggest solutions to existing problems.

And there is growing recognition that even those experienced in the traffic field, experts, perhaps, in their own particular endeavors, lack the breadth of background necessary to cope fully with their own responsibilities.

Whatever the specialty—police enforcement, traffic engineering, driver licensing, school pedestrian safety, vehicle education, driver education, high-

Glenn M. Schultz is engaged in teaching, research and writing as a member of the staff of the School of Police Administration, Michigan State University.

way planning, research, or any of the others—doing a good job requires at least a rudimentary knowledge of all the other specialties.

It must be emphasized that many benefits have resulted from the attraction to traffic work of those persons who are particularly learned in the fields of their earlier careers. Professionals entered the traffic safety field with backgrounds of publicity, journalism, government service, education—from all the butcher, baker, candlestick-maker endeavors of today.

Most of those who have followed careers in traffic safety work have been involved in a somewhat narrow functional part of the total problem. Their experience and training have been so specialized that few have had the opportunity to become well grounded in the many phases of the total accident prevention process.

The need for people specially trained in a general area such as education or communications — examples of two of the many areas involved — who can apply their skills to traffic problems will continue and increase as the many intricacies of the traffic problem become fully recognized. These people, attracted to traffic safety from previous specialties still must develop appreciation of the many complexities of motor vehicle traffic.

The emphasis of recent years on driver education and traffic engineering was necessary to develop such workers in sufficient number partially to satisfy an immediate demand. The complexities of the traffic problem are such that the services of other professions are also sorely needed. Competent people in the fields of research, psychology, sociology, communication arts and a dozen others can and must apply their special abilities to the traffic problem. These professionals must learn much about the inter-relationships of many activities connected with the attempts to provide traffic control.

Something more is needed, however. There continues to exist an immediate need for career people to serve in any of several traffic areas and to cultivate their potential for leadership in the broadest sense of the term.

The demands upon such traffic safety workers will be by no means restricted to the narrow confines of traffic itself.

They must understand basic educational principles and know what makes people tick—through study of psychology and sociology. They must understand municipal, county, and state government—to work in cooperation with official agencies. They must know enough of urban planning to think of the needs of tomorrow as well as those of today.

Finally, those in traffic safety work must be able to communicate safety needs and plans to the public — the final authority to support their efforts.

In brief, traffic has outgrown its traditional Big E's of engineering, education and enforcement. It involves all the ABC's and XYZ's in the alphabet of modern living.

All these things, and more, were discussed in those informal sessions of a decade ago. One of the participants was Gordon H. Sheehe, then with Michigan State University's School of Police Administration and Public Safety, now Director of MSU's Highway Traffic Safety Center.

From these informal conversations, and the specific questions Sheehe asked of many others, there evolved a highway traffic administration curriculum. The title of "highway traffic administration" might appear to some to be overly ambitious.

But, when one realizes that prevention of traffic accidents and improvement of motor vehicle movement is basically a huge task of public administration, including many functional areas of government, as well as public and private agencies, the title becomes more meaningful.

The objectives of this unique curriculum plan are to provide the career-minded future worker in traffic with a basic understanding of all facets of the traffic problem; to acquaint him with the many techniques of accident prevention, and to give him essential knowledge about government, management, human relations, and communications.

This unusual course of study was approved by Arthur F. Brandstatter, director of the School of Police Administration and Public Safety, and by university authorities in 1954. It is administered by the School of Police Administration with assistance from the Highway Traffic Safety Center, which is a unique development itself.

Although in its infancy, there are already six graduates of this program with bachelor of science degrees. Eight undergraduates are now enrolled. Five students, including two graduates of the program, are now studying for masters' degrees.

Included in this latter group is Bruce Madsen, veteran of both Navy and Air Force service, who was the

On Detroit field trip, Bruce B. Madsen, first graduate of MSU's unique course, (left) observed radar in action. At right is William H. Polkinghorn, now traffic director of Detroit Police Department. Madsen is now assistant director (field services) at Michigan State University's highway traffic safety center.

guinea pig of the new curriculum. He enrolled as a one man class in the program in 1954, when it was first offered, and through the acceptance of credits he had earned at the University of Utah, was graduated in 1957. Madsen's experience has since been used as a guide for modifications in the course of study.

Highway traffic administration is but one of the six majors offered by the School of Police Administration and Public Safety. Also available are majors in law enforcement administration; police science; prevention and control of delinquency and crime; corrections administration and industrial security administration.

The highway traffic program, however, calls upon several other colleges, schools, and departments of the university, spread about the 4,250 acre campus. In addition, a score of outside agencies—municipal and state offices in other parts of the country, private safety groups, and automotive and allied industries — participate in providing field training, an integral part of the curriculum.

Versatility is a prime requirement for those in the traffic field. Needed are people at the operational level who are capable not only of working with the various specialists but eventually of integrating the work of specialists.

The common aim is that of moving vehicles swiftly and safely upon our streets and highways. But the situations which exist today will be magnified tomorrow by the anticipated increase in cars, drivers, and miles of travel. The threat is that more travel will mean more accidents and there is a shortage of career people adequately prepared to meet this threat or challenge.

As this concept became apparent, there arose the necessary and difficult task of formulating a course of study which would satisfy the requirements. There was no archetype or model of the trained highway traffic administrator such as MSU hoped to develop.

Some comparison can be found in the need, a few years back, to train men for careers as city managers as that form of government became popular. Many of the early city managers were formerly city engineers and other city officials who had to learn about the unfamiliar aspects of their new job the hard way. When the need for city managers having a broader background in municipal operations was recognized, universities across the country set up educational programs to meet this demand.

Perhaps a better counter-part may be found in the field of medicine where general practitioners "treat the whole man," following the precept of Sir William Osler. They understand and appreciate the work of specialists, call upon them, but do not devote themselves to any one part of the human anatomy or to any one division of the broad art of healing. Add to this the fact that the specialists, themselves, cannot practice as such until they have had full training in the basic "whole man" understanding of their profession.

Likewise, the more competent traffic worker understands and appreciates the work of the engineer, the educator, the enforcement official and the research scientist. Eventually, and with further training, he may become expert in some specialty, himself. But at the same time he realizes that one of the few facts known about the complicated anatomy of our traffic problems, and about its many fatal ills, is that the problem is not solvable by any one knowledge itself.

Traffic safety specialist Robert J. Forman puts his MSU training to work in the motor transport department of the National Safety Council. Here he lectures on how to build a fleet safety program.

A Large Order

To satisfy this broad concept of a traffic career worker, a course of study needed to be flexible enough to emphasize the areas best suited to the individual's interests, abilities, and ambitions.

Yet it had to furnish the sound and well-rounded background which a competent traffic worker would require.

Finally, it had to provide the broad understandings which constitute an educated person in addition to the skills and techniques of a professional.

This latter demand is satisfied by the University College, a requirement for all Michigan State University students. It provides the student a liberal arts education in his first two years and accounts for 57 of the 192 credits required for graduation.

The School of Police Administration requires that a traffic major take certain courses within its jurisdiction. These courses are in law enforcement, traffic administration, traffic law enforcement, including the court and legal aspects, traffic education and police records.

In all, the required subjects take the student into six of the nine colleges of the university, another demonstration of the diversity of knowledge needed to cope with the problems of traffic and traffic safety.

A course in traffic engineering is taken with civil engineering students,

and is by no means intended to fit the student to be a working traffic engineer. Yet, he has an appreciation of what is involved and what can be done by this approach. The usual mathematics prerequisites are waived and the course, itself, is a stern challenge.

The student learns the importance of driver education through courses in the subject, taken with those who are preparing for careers as teachers. To these are added training in audio-visual instruction, a tool of increasing importance to the educator.

In knowledge that automobile drivers and pedestrians are people, and as such constitute the most variable and unpredictable elements of the whole traffic problem, other required subjects are in psychology and sociology.

Equal attention is paid to the political sciences, not only in the study of state, municipal and local government but in the techniques of investigative research—feeling the public pulse to learn mass opinion and reaction.

In the broad field of government, the student also studies urban planning, both for large cities and for small towns.

This adds still more building blocks to the structure of his understanding that "traffic" is not a thing apart but will continue to affect, and to be affected by, the whole pattern of our daily lives. Transportation can mean life or death to population centers of the future, just as population migrations and changing modes of life can make archaic the traffic patterns of yesterday.

Get Other's Point of View

The traffic administrator won't become an urban planner, but he must gear his thinking to that of the planners.

So, too, it is with the student's courses in business administration. He must learn enough of mechanical tabulation and of accounting so he can, at least, be able to ask intelligent questions of those specializing in this field, and to apply their answers to his own needs.

Perhaps the greatest emphasis is upon the student's study of the communication arts, skills, and sciences. Through these means he will convey to the public—those variable people of the traffic safety problem — the thinking of all the specialists in their respective areas.

Graduate Benjamin A. Geerds is now a traffic engineer with the City of San Diego. Picture shows him on the job with Sgt. Robert Ristau of the San Diego Police Department's traffic division.

Without public understanding and cooperation, other efforts will have been wasted. So the student learns about public speaking, persuasion, and parliamentary procedure. He learns about journalism and how it influences public opinion. He learns the rudiments of news writing, typography and advertising — as instruments of the printed word. He is taught the use of television and its great potential impact as an opinion moulding force.

To satisfy the need for flexibility in the education of a highway traffic administrator, the student earns 31 of his 192 credits in elective subjects, which he chooses from upwards of 75 available to him. Choice can depend upon the particular interests developed by the student, or upon his anticipation of the direction he hopes his career will take.

Those primarily interested in enforcement, foreseeing a career associated with police work, have a wide choice of advanced courses in policing techniques and administration. Those whose ambitions tend toward traffic work with other branches of government would strengthen their knowledge of political science.

Others aiming for safety council positions might want additional study in communications or in the social studies or in the economics of traffic and transportation.

Private business and industry is finding more and more need for traffic safety men—for example, in transportation, insurance or automobile concerns, or in utilities which operate fleets of their own vehicles. Students with such interests would seek more background in business administration, personnel relations and transportation engineering.

Education of the highway traffic administrator is climaxed by 20 weeks of field training. The student gets this in the fall and winter terms of his final year. In this period, any part of the country may become his laboratory of practical experience for the career into which he is about to enter.

This field training is carefully charted by the student in consultation with faculty and staff of the School of Police Administration and the Highway Traffic Safety Center. There is no geographical limitation upon the areas in which the students may take their look-see at the practical application of what they have learned in the classrooms. In one case, the student

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Ohio Turnpike Takes Stock

The Ohio Turnpike Commission on December 31, 1960 completed five calendar years of operation of the Ohio Turnpike with a record of continuing growth in traffic and revenue and improvement in safety, James W. Shocknessy, the chairman of the Ohio Turnpike Commission, said in the annual year-end statement.

Traffic and revenue attained new peaks during 1960 when approximately 12,753,000 vehicles travelled the turnpike and revenue from all sources was an estimated $25,000,000, thus exceeding by 691,634 vehicles and $1,679,140 respectively the traffic and revenue for 1959, the best previous year in the history of the Commission, Shocknessy said.

The Record

	Vehicles	*Revenue*
1956...	9,980,954	$15,350,966
1957...	11,264,285	19,757,629
1958...	11,226,155	20,822,657
1959...	12,061,366	23,320,860
1960...	12,753,000*	25,000,000*

Increased emphasis in 1960 on enforcement of law for the regulation of traffic on the turnpike was a major factor in bettering the safety record of the Ohio Turnpike, which has always been among the safest of the nation's highways, Shocknessy said. The extent of the betterment is displayed in the statistics on the ratio of reportable accidents—those involving personal injury or property damage in excess of $100—per 100,000,000 vehicle miles of travel on the turnpike. Over the five-year period the record shows the following:

Accidents per 100,000,000 vehicle miles	
1956.....	102.5
1957.....	85.0
1958.....	72.5
1959.....	77.7
1960.....	74.0*

The favorable safety experience was emphasized by the fact that except for a single fatal accident on Christmas Day there was no fatal accident on any holiday or any holiday period in the entire year of 1960.

*Estimated

COMING EVENTS

March 1-2, Philadelphia, Pa.

Twenty-seventh Annual Regional Safety & Fire Conference & Exhibit at Bellevue-Stratford Hotel. Contact Harry H. Verdier, Executive Director, Safety Council, Chamber of Commerce of Greater Philadelphia, 121 S. Broad St., Philadelphia 7.

March 2-3, Urbana, Ill.

Thirteenth Annual Illinois Traffic Engineering Conference. For further information contact John E. Baerwald, 404 Civil Engineering Hall, Urbana, Ill.

March 5-7, Atlanta, Ga.

Southern Safety Conference and Exposition. Atlanta Biltmore Hotel. Contact W. L. Groth, executive director, Southern Safety Conference, Inc., P. O. Box 8927, Richmond 25, Va.

March 14-15, Fort Wayne, Ind.

Northeastern Indiana Safety Conference and Exhibit. Contact Ivan A. Martin, manager, Safety Council, Chamber of Commerce Bldg., Fort Wayne, Ind.

March 26-29, Houston, Tex.

Twenty-second Annual Texas Safety Conference and Governor's Highway Safety Conference, Rice Hotel. Contact J. O. Musick, general manager, Texas Safety Association, Inc., 830 Littlefield Building, Austin, Tex.

March 28-30, Los Angeles, Calif.

Eighth Annual Western Safety Congress & Exhibits. Ambassador Hotel. Contact Joseph M. Kaplan, manager, Greater Los Angeles Chapter—NSC, 3388 W. 8th St., Los Angeles 5, Calif.

April 3-4, Boston, Mass.

Fortieth Annual Massachusetts Safety Conference and Exhibit. Hotel Statler Hilton, Boston. Sponsored by Massachusetts Safety Council, Safety Council of Western Massachusetts and Worcester County Safety Council. Contact Bert Harmon, manager, Massachusetts Safety Council, 54 Dovenshire St., Boston 2, Mass.

April 10-14, New York, N. Y.

Thirty-first Annual Safety Convention and Exposition of the Greater New York Safety Council. Hotel Statler-Hilton. Contact William J. Farley, Convention Director, Greater New York Safety Council, 60 East 42nd St., New York 17, N. Y.

April 11-12, Oakland, Calif.

Ninth Annual Northern California Safety Congress and Exhibits, Hotel Claremont. Contact Clinton W. Dreyer, managing director, Eastbay Chapter, National Safety Council, 1322 Webster St., Oakland 12, Calif.

April 18-20, Houston, Tex.

Fifth Annual Industrial Mutual Aid & Disaster Control Seminar sponsored by National Institute for Disaster Mobilization and Channel Industries Mutual Aid at Shamrock-Hilton Hotel. Contact S. A. Anthony, National Institute for Disaster Mobilization, 475 Fifth Ave., New York 17, N. Y.

May 1-3, Syracuse, N. Y.

Seventh Central New York Safety Conference & Exposition, Hotel Syracuse. Contact Newell C. Townsend, manager, Greater Syracuse Safety Council, Syracuse Chamber of Commerce, 351 S. Warren St., Syracuse 2, N. Y.

May 4-6, Norfolk, Va.

Twenty-seventh Annual Conference of Virginia Safety Association at Hotel Monticello. Contact Hiram M. Smith, Jr., publicity director, Virginia Safety Association, 810 Mutual Bldg., Richmond 19, Va.

May 8-10, Bethlehem, Pa.

Thirty-fourth Annual Eastern Pennsylvania Safety Conference at Hotel Bethlehem. Contact Harold A. Seward, secretary-treasurer, Lehigh Valley Safety Council, 602 East 3rd St., Bethlehem, Pa.

May 9-11, Niagara Falls, N. Y.

Twenty-first Western New York Safety Conference, Hotel Niagara. Contact Clifford H. Seymour, Western New York Safety Conference, P. O. Box 315, Niagara Falls, N. Y.

May 10-12, Durham, N. C.

Thirty-first Annual North Carolina Statewide Industrial Safety Conference at the Jack Tar Durham Hotel. Contact H. S. Baucom, director of safety, North Carolina Industrial Commission, Raleigh, N. C.

May 18, Green Bay, Wis.

Thirty-third Fox River Valley and Lake Shore Regional Safety Conference. Contact J. A. Long, general chairman, Bay West Paper Co., Green Bay, Wis.

June 13-14, Hartford, Conn.

Connecticut Safety Conference, Hotel Statler. Contact Charles Wooding, Conference Chairman, Wallingford Steel Co., Wallingford, Conn.

June 15-17, Carbondale, Ill.

Eighth Annual Conference of the Campus Safety Association at Southern Illinois University. Contact James E. Aaron, Program Chairman, Safety Education Center, Southern Illinois University, Carbondale, Ill.

Chrysler Plugs Seat Belts With Non-Profit Dealer Offer

In a move to encourage greater use of safety seat belts, Chrysler Corp. will offer them to its dealers on a non-profit basis and is recommending to the dealers that they make the belts available to owners of all makes of cars on a similar basis.

Announcement of the important new safety program was made by L. L. Colbert, chairman of the board and president of Chrysler Corp. He spoke at the annual traffic safety luncheon of the Automotive Industries Highway Safety Committee.

Colbert said, "In line with our aim to make it as easy as possible for motorists to buy and install seat belts, we have advised all dealers selling and servicing Chrysler Corp. cars that we are prepared immediately to stock them with seat belts on a non-profit basis.

"The price of each belt to the dealer will be $6.35. We have recommended that the dealer in turn, as a public service, offer the belts to owners of our cars and to owners of competitive makes on a non-profit basis, with only a nominal charge being added for installation.

"The same policy is being recommended with regard to seat belts installed in new Chrysler Corp. vehicles. In addition we are preparing a system of awards to be made to dealers who show the best improvement in the number of seat belt installations during the coming months."

In his speech to the safety luncheon, Colbert said evidence in favor of the use of seat belts was becoming more impressive every year. He urged a three point program to promote wider use of the belts.

This program includes a recommendation that those interested in safety set a good example by using the belts themselves; that dealers display the belts prominently, install them in demonstrator and driver training cars loaned to schools and explain their value to customers at every opportunity, and, finally, that manufacturers and dealers cooperate to make it easy for drivers to buy them and have them installed at the lowest possible price.

Colbert said:

"Any progress achieved by automobile people in encouraging motorists to buy and use seat belts will be a strong support for the efforts of the American Medical Association, the United States Department of Health, Education and Welfare, and the National Safety Council. As you know, these three organizations are engaged in a long-range program of education aimed at the wider use of seat belts."

Turnpike Research In Pennsylvania

The Pennsylvania Turnpike Commission announced recently that it will work with the state's medical society to research additional safety measures required for turnpike driving.

The commission has asked the society to assist in evaluating the pattern of accidents on the turnpike. The society will be authorized to research all accident reports and observe firsthand the circumstances leading to accidents. A special committee from within the society will be named to study the problem.

In a letter to the president of the medical society, the commission pointed out that 15 of the 45 fatal accidents occurring on the turnpike in 1960 have been attributed to drivers falling asleep at the wheel. In addition, more than 30 per cent of the accidents on the turnpike are caused by vehicles ploughing into the rear of others.

While asking the medical profession for assistance, Lawler outlined the commission's enviable safety record in 1960. Fewer accidents per 100 million miles were recorded in comparison with past years, although traffic increased by about 7 per cent. An 18 per cent reduction in fatal accidents this year marks the second consecutive year that fatal accidents on the turnpike have been reduced while traffic has increased considerably.

Yale Announces Fellowships

The Bureau of Highway Traffic at Yale University has announced the availability of fellowships for the 1961-62 academic year to be awarded to qualified graduate engineers who are citizens of the United States and would like to enter the profession of traffic engineering as a career.

The fellowships cover a full academic year of graduate study, starting in September, 1961 and terminating the following June. They provide a living stipend of $1,400 disbursed at the rate of $175 per month for a period of eight months, while a student is enrolled. The fellowships also provide the tuition of $1,000, which amounts to a total value of $2,400 for each fellowship. The fellowships are made available to the bureau through grants from the Automotive Safety Foundation, the Esso Safety Foundation, the Insurance Institute for Highway Safety and The James S. Kemper Foundation.

Further information may be obtained by writing to Fred W. Hurd, director, Bureau of Highway Traffic, Yale University, Strathcona Hall, New Haven, Conn.

Reflective Plates

New Mexico's 1961 license plates are covered with reflective material that glows in the dark.

The state is the 10th to adopt reflective license plates as a nighttime safety measure.

A one year test of this type of license plate, completed recently in Polk county, Iowa, indicated that they contributed to substantial reductions in accidents involving parked or stalled cars. The reflective plates enabled oncoming drivers to see parked cars at night in plenty of time to avoid them.

The Iowa public safety commissioner was so impressed by the advantages of reflective plates that he recommended their adoption by the entire state. His figures indicated that Polk county residents saved more than $400,000 in costs of parked-car accidents during the one year test period.

A SEAT BELT MAY SAVE YOUR LIFE

by Tom Mahoney

Sir Donald Campbell walks into hospital after 300 m.p.h. crash. Campbell was wearing seat belt at time of accident. Wreck is shown below.

AS A couple drove an elderly woman neighbor home from church in Dallas, Tex., one Sunday a few months ago, another car crashed into theirs at an intersection. Neither overturned. It was a minor accident, but the woman passenger in the back seat was thrown out on the pavement and hurt fatally.

I remember this well. She was my mother.

A few days later a sports car in which two young men were riding failed to negotiate a sharp turn on the scenic highway near San Simeon, Calif. In the "wildest ride" on the local records of the California Highway Patrol, the car hurtled into the air and rolled over and over for 200 feet down a 70 per cent grade toward the beach on the ocean side of the highway. The occupants walked away from the wrecked vehicle with only slight injuries.

What made the life-and-death difference between the Texas and California accidents was the use of seat belts of the sort that all air passengers fasten as planes take off or land. My mother had none, but the men in the sports car wore belts and, according to the California Highway Patrol, owe their lives to them.

The value of seat belts is easily explained. In any collision, an automobile is stopped suddenly but the people inside, unless restrained in some way, keep going—smashing into some part of the interior or, more seriously, being thrown out perhaps on hard pavement in the path of other cars. The risk of serious injury or death is five times greater for the person who

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is ejected than for the person who stays inside a car in an accident. Automotive seat belts, properly installed and worn, prevent this ejection. They cost only $10 to $17 each.

Nineteen years of research at Cornell University, University of California and elsewhere, including the accident records of 22 states, have confirmed the usefulness of the ordinary lap-type belts in the great majority of automobile accidents. A new booklet published by the National Safety Council in cooperation with the U. S. Department of Health Education and Welfare and the American Medical Association summarizes the data:

"Seat belts can help protect you—and members of your family—from death or critical injury. An immense amount of scientific research, including actual vehicle crashes under controlled conditions, proves that the automobile seat belt is the most effective single item of protective equipment presently available to reduce the toll of traffic injuries and deaths."

Impressive Facts

None of the 442 motorists killed last Fourth of July wore belts. Investigators stated definitely that in 42 per cent of the crashes which did not involve a pedestrian, seat belts would have saved the victims' lives. In another 20 per cent, investigators felt that belts probably would have prevented death.

In fact, investigators calculate that 30 to 60 per cent of the 30,000 Americans killed annually while riding in automobiles or trucks could be saved and the more than four million injured reduced proportionately by the use of seat belts.

The reliability of belts was shown by a Cornell study of 712 seat belts worn in accidents. Investigators found that 701 of the belts functioned as intended. Nine of the 11 failures were due to faulty installation. In the other two failures, the belts were made of sub-standard webbing.

Despite this impressive evidence, acceptance of safety belts by the public has been slow. Factory installed seat belts were offered as early as 1949 by Nash, the predecessor company of American Motors. All the major car manufacturers promoted belts in 1956 models. But the public was apathetic. Even today only about two cars in 100 have belts. There is also sad evidence that many of the drivers of cars so equipped do not wear the belts with any regularity. But there are developments which promise to increase both the purchase and use of seat belts.

Though divided in the past on seat belts, all U. S. automobile manufacturers now agree on their merits. If a substantial number of new car buyers ask for them, automobile company executives predict belts will become standard equipment on cars. In the meantime, all manufacturers offer them as optional equipment.

General Motors is delivering its 1961 Corvette with upholstery-matching seat belts. All the major companies are providing seat belts free-of-charge in cars loaned by dealers to high schools for driver-training programs. General Motors also is distributing a million copies of the National Safety Council's *Seat Belts Save Lives* booklet.

Since the Army discovered during the Korean War that it was losing more men in automobile accidents than in battle, government agencies have recommended the use of seat belts. In the armed forces, many camps are 100 per cent equipped. State police cars of 32 states have belts and 11 states require cars of all their agencies to have them. The U. S. Forest Service has used seat belts in its firefighting and other vehicles since 1954. "Our folks say the belts lessen fatigue on long trips," Seth Jackson, safety officer of the agency told a Federal Safety Council symposium on seat belts last October.

A pilot program was conducted last year (1960) in Ft. Wayne and Allen County, Ind. to identify the important obstacles to seat belt use and the most promising educational tactics to overcome them. In 1959 only 1,123 belts had been sold in the area. With all local organizations joining in a well-publicized effort, 1,264 belts were sold in the first six weeks of the program. In six months, 3,864 belts were sold. In this time, 15 persons wearing belts were in local accidents, several of them severe. None was hurt seriously and belts were credited with saving at least three lives.

Dr. Horace E. Campbell, a former missionary who is now a Denver surgeon and chairman of the Colorado Medical Society's safety committee, believes that legislation is needed requiring all cars to be equipped with belts. Motorists, he says, should not be given the choice of *not* having them "any more than they are given a choice of buying uninspected meat." Those who agree point out that automobile accidents are one of the leading causes of death between the ages of 15 and 25, and that such legislation would merely make automobiles subject to the sort of safety regulations to which ships, airplanes and trains have been subject for decades. State Senator Edward J. Speno of Nassau County is asking the New York State Legislature to make seat belt attachment points mandatory in 1962 in all cars in the state. Similar legislation has been introduced in Connecticut and Illinois.

Insurance companies, familiar because of their work with the human and monetary costs of automobile accidents, have led in putting belts into company automobiles and in encouraging employees to buy them for their own cars. The record of the "America Fore" group of insurance companies is an example of what belts and a safety program can achieve.

"America Fore" had an average of 1.5 fieldmen killed each year before putting belts into its 1,429 company owned cars in 1955. Since then, with more cars going more miles, the company has had only one fatality. In that accident, the man was sitting on his seat belt.

Satisfied Users

The most effective evangelists for seat belts, of course, are users who have been in serious accidents and escaped with little or no injury. Charles Pulse, an industrial relations man for the Northern Illinois Gas Co. at Evanston, Ill., for example, was riding along Highway 53 when a car in a collision ahead of him bounced against his car and rolled it over, crushing one side.

"When the car came to a stop I was hanging upside down from my seat belt," he recalls. "I don't know where I would have been otherwise. Walking away from that wreck with hardly a scratch convinced me. From now on, I won't drive around the corner without having the belt fastened."

Dr. Clarke W. Mangun, Jr., of Park Ridge, Ill., was driving home from a vacation at 60 m.p.h. with his wife and three small daughters when a car suddenly loomed at an intersection. He

braked and swerved but could not avoid a crash. His car spun 140 degrees and the other car skidded into a third. All cars were badly smashed. While some passengers had broken bones, Dr. Mangun and his family escaped with slight scratches. They had been held safely in their places by five seat belts.

Thanks to his seat belt, John Fitch, the American sports car driver, escaped with bruises when his car went out of control at 140 m.p.h. and rolled end-over-end at a racetrack in Rheims, France. A belt saved a Nairobi businessman when his car was demolished crashing into a 3,000 pound rhinoceros which suddenly dashed out of the bush onto a highway.

As half of the serious automobile accidents occur within 10 miles of the drivers' homes, seat belts can save lives on city streets as well as the open highway. The car in which a friend of mine and his family were driving home one night last summer crashed into an unlighted stalled car in the heart of New York City. Those in the rear seat with no belts suffered broken bones but those wearing belts in the front seat, while closer to the impact, were unhurt.

Roy Campanella, former star catcher of the Dodgers, has been in two accidents which illustrate the value of seat belts. Wearing no belt he was wedged under the dashboard of his car when it skidded on wet pavement while traveling only 30 m.p.h. and hit a pole. Damage to the car was slight but Campanella's injuries paralyzed him from the waist down. A year later, he was in another automobile accident. The car was traveling faster and was badly smashed. Three persons with him who were not wearing belts were hospitalized, but Campanella was unhurt, thanks to his seat belt.

Probably the most dramatic illustration of the value of safety harness was provided last September by the British racing driver, Sir Donald Campbell. While speeding at better than 300 m.p.h. on the Bonneville Salt Flats in Utah, his Bluebird II was hit by crosswinds. The machine hurtled through the air for 300 yards, rolled over three times and slid for another 80 yards. Yet Campbell, held in place by his belt and shoulder harness, suffered only a hairline skull fracture as his head struck the cockpit. He arrived at the hospital at the same time as a woman whose car, going a mere 45 m.p.h., had hit a soft shoulder on the road. She broke her leg, pelvis and shoulder.

Sir Donald's experience proved, he said, "that if man can survive a 300 m.p.h. crash, broken bodies are quite unnecessary at lesser highway speeds."

Three car crash (third car barely visible in background) in which Dr. Clarke W. Mangun, Jr., and his family were involved. The entire family—all wearing seat belts—escaped with slight scratches.

Quinn Tamm Named New Head of IACP

Quinn Tamm, recently retired assistant director of the Federal Bureau of Investigation, has been named director of the field service division of the International Association of Chiefs of Police, according to Association President Robert V. Murray, chief of Washington's Metropolitan Police. He succeeds the late Ray Ashworth.

Commenting on the appointment of Tamm, who has served the FBI for more than a quarter of a century, President Murray said, "Our Association is very fortunate to have a man of Mr. Tamm's proven ability to take over this important position. The establishing of our field service division in 1959 was an event of the greatest importance in the police field. Under Mr. Tamm's leadership, the substantial progress it has made will be continued and give the police profession the organized means for substantial improvement in dealing with police problems."

Tamm, a graduate of the University of Virginia, began work in the FBI in December, 1934. He was appointed a special agent in April, 1936.

Rex Whitton Appointed Federal Highway Administrator

Rex Whitton, chief engineer of the Missouri State Highway Commission, has been appointed federal highway administrator.

He succeeds Bertram D. Tallamy, who has headed the nation's road-building program since 1957.

In announcing the appointment, President Kennedy said:

"Mr. Whitton's long background in every phase of highway work will place the direction of the nation's important highway program in the hands of a man of unmatched experience."

Whitton has dedicated his career to highway improvement. He has been connected with the Missouri State Highway Commission since 1920, the same year he graduated from the University of Missouri with a degree in civil engineering. He became chief engineer of the commission in 1951.

He is a former president of the American Association of State Highway Officials and chairman of the Highway Research Board.

Carol Lane Awards Nominations Open

Nominations are now open for the 1960-1961 Carol Lane Awards for Traffic Safety—the awards that recognize women and women's organizations for leadership in the never-ending fight against traffic accidents.

The awards, established in 1951 by Shell Oil Co., are presented annually by the National Safety Council through a Shell grant. They are the only national recognition for women's work in traffic safety, and are named for Shell's women's travel director.

Nominations for the current awards program will be accepted until June 1. Entries must be submitted on an official entry blank, and must be for a traffic safety program carried out during the 18 months preceding the deadline date.

Entries will be judged in three categories—rural areas and cities of less than 25,000 population; cities of 25,000 population or more, and statewide projects.

The awards in each category:

First place—a $1,000 savings bond and a bronze sculpture symbolizing woman's protective instinct.

Second place—a $500 savings bond and a bas-relief plaque of the sculpture.

Third place—$250 in savings bonds, and a bas-relief plaque of the sculpture.

In addition, certificates of merit are awarded other outstanding entries.

Any American woman more than 18 years of age who is not employed in traffic safety work, or any women's or parents' group, is eligible for the Carol Lane Awards.

Need for active participation in traffic safety by women and women's groups is pointed up by this fact from the National Safety Council:

Motor vehicle accidents, the No. 1 off-the-job death dealer, take the lives of more workers than all at-work accidents combined.

Further information on the Carol Lane Awards for Traffic Safety may be obtained from the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

WHEN DEATH WINKED BACK

(Reprinted from the C & O Railway's *Chessie News*)

I HAVE always considered myself lucky, for various reasons, but now more so than ever. Over the weekend I looked Death in the eye and Death winked back. If it wasn't Death's eye, then certainly it was the I in Injury that I saw.

We spent Christmas Eve at my in-laws' home in the country. We had planned to return home the same night but, because the roads were bad, decided to stay over. Early the next morning, Christmas Day, my oldest son, Mark, and I started off for church. The others weren't going until later. That was break No. 1.

The country road we first traveled was snow-covered but didn't appear slippery. When we hit the state highway I remember thinking: we'll have easy sledding now. How prophetic.

We were late for church and I was driving far too fast, I fear. But the road seemed perfectly clear. The thin sheet of ice that covered it wasn't discernible. In searching for my cigarette lighter, I bumped the steering wheel. The next thing I knew, the back wheels of the car were racing the front wheels.

The Moment of Decision. What do you do when you suddenly find yourself driving down an icy road sidewise? You turn the wheel the opposite way. Nothing happens. You hit the brakes. Nothing.

We began spinning. Three or four times. My world was spinning, too. The car was out of my hands, and so was the life of my son and me. We now belonged to Fate. In that crazy moment I distinctly remember thinking: "Craps, here goes one of those statistics." The previous day I had heard a radio report on how many had been killed so far over the holiday weekend.

The car hit the berm of the road and shimmied. It spun again. I saw a telephone pole up ahead and ducked down. The back of the car hit the bank of a ditch. What happened after that is a blur. The next thing I know is that we had stopped. We were in a deep ditch, the car on its side. We had just missed the telephone pole.

"You all right, Mark?" My son looked at me with empty eyes. He said nothing at first. His legs were bent under him. I thought both were broken. Finally he said he was all right, but I didn't believe him until I saw him uncurling his legs.

Slowly we climbed out of the car and climbed up the bank onto the road. We just stood there, looking at the car. I felt so guilty, so responsible, for what had happened. I wanted to say something to Mark, but I didn't know what. He said it for me, without words. He put his arm around my waist.

"We'll have to call," I said. We started walking towards a house up the road. But we didn't stop there. We kept on walking all the way to the home of my in-laws, about three miles away. It never felt so good to be walking.

—Bill Girgash
Editor, Chessie News

NEWS FROM CAPITOL HILL

A NEW administration and a new Congress came to Washington in 1961.

The New Administration

Immediately after Election Day, President-Elect Kennedy set in motion a study of the federal regulatory agencies, including those dealing with transportation. The resulting report, by James M. Landis, contains the following on transportation:

1. "The prime and immediate need is for developing and coordinating policy immediately at a high staff level." "The greatest gaps . . . are in the planning for forseeable problems." He urges that "an articulate national transportation policy . . . be ground out by the process of coordination," not only among the federal agencies involved but also "with various state and municipal agencies in order to deal with problems of a local or regional character."

2. "The commutation crisis that was apparent a decade ago has had little or no effective help from the federal government. . . ."

3. He recommends creating "within the Executive Office of the President an office for the Coordination and Development of Transportation Policy to develop and implement a national transportation policy," and suggests that such office be given all responsibilities now vested in the Undersecretary of Commerce for Transportation. This new office "would need no regulatory powers."

4. He sets forth "a tentative program of what could be accomplished through such an office by way of immediate objectives and longer range objectives." Of the 10 specified "immediate objectives" the first two are:

a) "The achievement of a program for amelioration of interurban public transportation, including the establishment of metropolitan transit commissions with federal aid in the form of matching guaranteed loans for the acquisition and improvement of facilities and equipment. . . .

b) "Formulation of policies to coordinate federal highway aid programs with approved metropolitan transit plans, so as to promote the economic soundness and efficiency of metropolitan public transportation systems as a whole, with emphasis on the avoidance of traffic congestion and the decline of public transportation."

In releasing the Landis Report, President-Elect Kennedy said:

"This is a most important and impressive analysis of the regulatory agencies which deserves the attention of the members of Congress as well as the agencies themselves."

He also appointed Landis as Special Assistant to the President in connection with these proposals.

The President-Elect also established a special task force on distressed areas to draft a program for economic revival in areas of chronic unemployment. The committee divided itself into seven panels, each with assigned fields. One such panel dealt with highway programs, among other matters; another's assignment included mine safety. The resulting report placed great emphasis on highway construction among the public works that could help such distressed areas. Highway construction was so conceived not only in emergency terms, but also as part of area redevelopment legislation and long range planning. Local and regional access roads, in particular, were stressed, as well as full state use of federal aid highway funds. The report urged: "the criteria for highway routing and capacity should take into account how economic growth can be stimulated. . . ." It also urged federal appropriation to initiate projects for sealing off abandoned coal mines.

Traffic Safety

The President's Committee for Traffic Safety met with its advisory and technical groups and with state and municipal representatives, to review and up-date its Action Program. In the key-note speech, Dr. Waldo E. Stephens issued the challenge: "Could it be that one of our foremost tasks is to take inventory of our own concepts, ideas and cliches, which have become a bit thumb worn and outmoded?" In partial reply, he said that the safety movement must realize "that old concepts, patterns of individual conduct, are not adequate to meet the changed social order."

The experts in attendance made hundreds of recommendations for the consideration of the President's committee. Among these are the following: (1) "non-fix" tickets; (2) compulsory vehicle inspection; (3) a nationwide system of driver education in the schools; (4) uniform "rules of the road" and traffic signs and signals; (5) improved staffing and administration of traffic courts; (6) improved safety design of autos on a priority basis, with particular emphasis on defrosting and wiping equipment, braking systems, vehicle handling, standardized location of instruments and controls, restraining devices and better absorption of impact energy, evaluation of the safety aspects of automatic controls, and measures to forestall driver fatigue; (7) planning of urban transportation facilities in coordination with safe traffic needs; (8) stepped-up public information programs; (9) initiative by civic and business leaders in the establishment or strengthening of state and community citizen support groups; and (10) increased emphasis by business and industry to off-the-job safety programs.

Congressman Roberts announced plans for hearings in connection with new air pollution control legislation. Among the subjects to be included are motor vehicle and jet fumes. He commented that the auto industry is "feet-dragging" in making available as standard equipment "blowby" devices to eliminate auto crankcase fumes.

An advisory committee to the Public Health Service recommended a three fold increase in research to control air pollution, from $11 to $32 million annually by 1968. The committee recommended that the federal government assume 40 per cent of this cost, industry 28 per cent, and state and local government 32 per cent. Among other things, the committee's report entitled "National Goals in Air Pollution Research" notes that "air pollution . . . creates hazards for ground and air traffic."

To Page 44

BOOSTER MATERIALS

ORDERS FOR NEW POSTERS SHOWN CANNOT BE SHIPPED UNTIL AFTER APRIL 1

NEW 5 MINUTE SAFETY TALKS NOW READY

Now ready for sale is the new illustrated edition of "5 Minute Safety Talks for Driver Supervisors."

Driver supervisors play a key role in the accident prevention programs of their companies. The way they talk, think, and act about safety determines to a great extent the attitudes of their drivers. But for driver supervisors to merely tell their men to drive safely is not enough—as supervisors they are expected to tell their men *how* to drive safely. These safety talks are designed to give supervisors the facts and ideas they need to talk about safety.

Written by Veteran

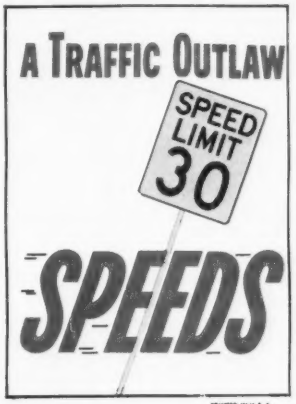
The book of 52 five minute safety talks has been planned to aid all persons who are responsible in any way for the safety performance of drivers employed by business, industrial or government fleets, and can be used by sales managers, route supervisors, technical chiefs, etc.

Compiled by Donald S. Buck, a veteran of nearly 30 years in the traffic field, these talks read more like a chat with an old pro than prepared talks. Buck's love for safe driving is apparent from a reading of these talks.

The book contains an article on how to put the talks to good use. It gives detailed information on how to prepare for and run a meeting, and suggested items to cover during the drivers' meeting.

Stock No. 229.53. Prices: $2.25 per single copy; 2-9, $1.95; 10-99, $1.70; 100 or more, $1.60.

NEW TRAFFIC POSTERS FOR JUNE POSTING



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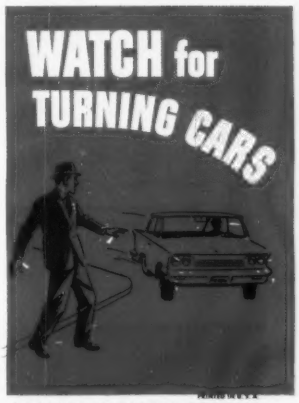
T-2099-A 8½x11½



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ALTERNATE POSTERS FOR JUNE POSTING

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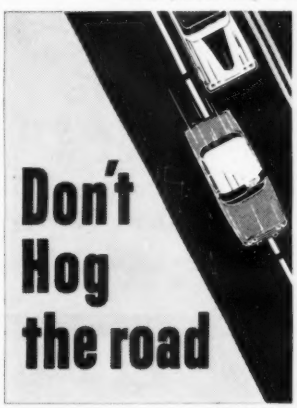

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PRICES FOR ABOVE POSTERS

Traffic Posters—T-prefix to number

	1-9	10-99	100-999	1000-4999*
A Size	$0.19	$0.13	$0.077	$0.066
B Size	.35	.25	.21	.17
C Size	.44	.33	.26	.24

YOUR CREDIT LINE can be imprinted at time of the press run on Traffic B and C posters only. Orders for imprints on June posters above must be received by April 10, 1961.

Imprinting charges for these posters are $2.25 per lot plus an initial charge for each electroplate of $21.00 for C poster imprint and $12.50 for B poster imprint.

*Write for prices on quantities of 5,000 or more and for special rates on annual poster orders.

PRICES SHOWN ARE SUBJECT TO A DISCOUNT OF 10% TO NATIONAL SAFETY COUNCIL MEMBERS

FLEET POSTERS

POSTER PRICES

Posters illustrated on these pages are included in the automatic Motor Transportation poster services. Automatic poster sets are available on yearly subscription that provides (4) subjects per month viz. (2) "A" size (8½"x11½") and (2) "B" size (17"x23"). 281.31 Automatic service is provided in the following categories:

City Truck Intercity Truck Sales Truck Truck Terminal	City Bus Intercity Bus Taxicab Bus Terminal	Annual price 1-4 sets, $9.90; 5-49, $7.80; 50 or more, $6.44.

Posters are available for individual selection at the following prices:

	1-9	10-99	100-999	1000-4999*
A size	$0.19	$0.13	$0.077	$0.066
B size	.35	.25	.21	.17

All prices shown are subject to a 10% discount to National Safety Council Members. *Write for prices on quantities of 5,000 or more. See page 29 for prices of posters with T-prefix.

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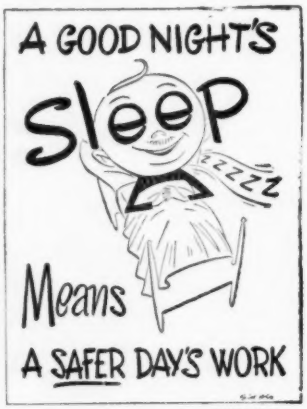

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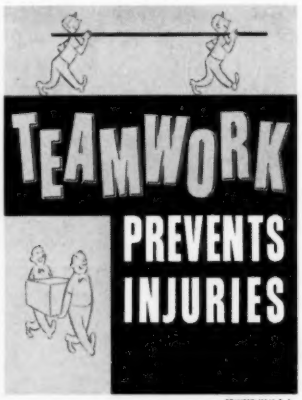

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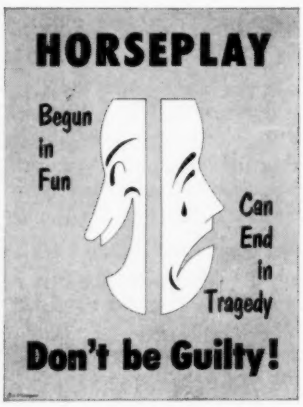

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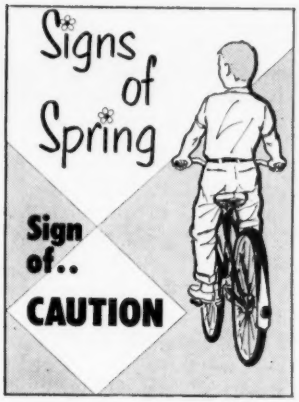

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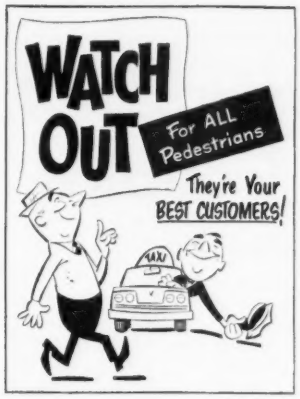

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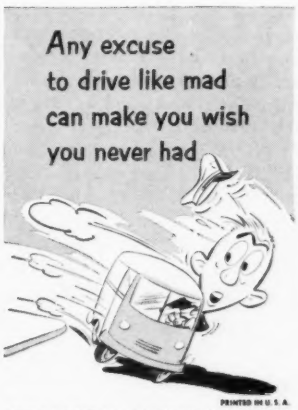

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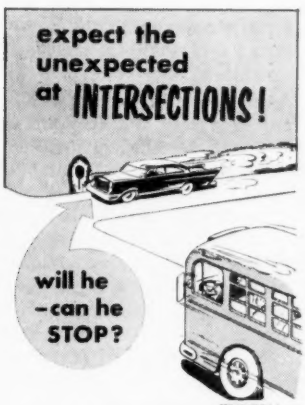

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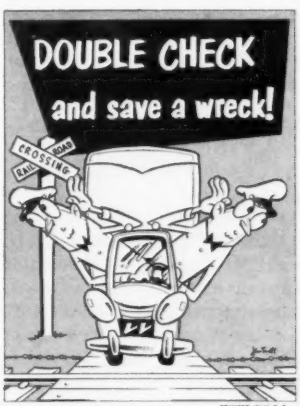

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Drivers Can Help Spot Mechanical Troubles

by Judson Nichols

I HAVE heard several experienced school transportation men say that they just didn't want their bus drivers to know a single thing about the mechanics of a school bus. I've even heard them say, "I don't want them to carry as much as a pair of pliers or a screw driver."

Their reason for making such statements, of course, is that they don't want bus drivers tinkering with the engine or making repairs which they probably don't know much about. This might be well and good as long as the bus is operating within a short distance of the school bus garage within reach of a qualified school bus mechanic in a matter of minutes. But what about the operator who must drive on long trips away from the immediate area of the school bus garage, the operator who makes trips at night when the garage will be closed, or those few precious seconds a driver might have if his bus became stalled on a railroad track and one simple correction by the driver could get it running again?

Drivers can help promote a safer, more efficient and more economical school bus transportation system if we will take the time to teach them a little more about the mechanics of a school bus. I have found them to be very responsive to such a program if it is presented to them in a way they can understand.

Let's talk about safety, first.

A. Certainly a driver who understands the mechanics of a bus should be able to recognize many of the early symptoms of brake failure, which could mean the difference in a safe ride or having an accident such as a couple which happened in two southern states in the last two years because of brake failure.

Judson Nichols is coordinator of school bus driver and maintenance training, State of Florida Department of Education.

What are some of these symptoms?

1. If a brake pedal goes all the way to the floor or needs pumping, it usually needs adjustment.
2. A spongy brake pedal usually indicates air in brake system.
3. If brake is stationary for a minute following application then eases toward the floor board, it indicates the master cylinder is defective.
4. If the driver spots brake fluid on wheel or inside of tire, he should look for loss of brake fluid at wheel cylinder—leaky wheel sylinder or broken line. A good safety feature on many buses is a brake gauge which is a plastic container mounted inside the bus and connected to the master cylinder, which gives a driver a visual check on the amount of brake fluid available for use.

What about the emergency brake? Has it been adjusted properly lately? This is often neglected. Many of these brake levers are so short that drivers have to put their heads below the dash board to reach them.

B. Another item which cannot be overlooked as affecting safety is the running condition of the motor. There have been many times when the very lives of a whole busload of children depended on that right amount of gas or the tiny spark which gave life to the engine so that it could clear the track in front of the onrushing train.

Suppose that the bus is operating with an engine that is skipping or missing, which could be caused by water in the fuel system, a plug wire loose, poor electrical connections, or any other reason. Drivers definitely need to know that the engines of their buses are operating properly at all times and report any defects immediately to the garage.

Now let us talk a little about economy.

I believe that it's a waste of the taxpayers' money and the school bus mechanic's time to call the mechanic out on a long trip when the bus won't start because there is a loose battery connection or a coil wire has dropped from its socket. Any driver can be trained to spot these troubles and make emergency repairs.

The trained driver knows how to look for these little troubles when his bus fails to start and should check them and take time to wipe off the spark plugs and wires, make sure the wires are on the plugs and in the distributor cap before calling the mechanic to get the bus started.

One school bus supervisor has asked that his drivers check the fan belt for tightness each time they check the oil in the engine, and he has cut down tremendously on the number of emergency calls he formerly received from the bus drivers because of overheated engines or worn and broken fan belts.

The careful driver observes his temperature gauge constantly and checks for trouble, especially if he notices the temperature indicator rise above normal. A clogged radiator or a loose hose connection are some of the troubles a driver can help spot. By keeping a close watch on the ammeter, he may save a battery if the generator fails to charge properly.

In recent weeks I have been noticing some of the troubles which drivers can help spot in school buses, such as losing grease around the rear axle bearing, loose lug nuts, one headlight out, uneven tire wear (rap inside dual tires with heavy object to check pressure), windshield wiper hose connection loose, too little clutch pedal clearance.

Safety, economy, and now what about efficiency? Where does it fit into the picture?

A transportation system can be operated in a safe and economical way but fail to be efficient. An efficient system, in my opinion, is one in which every employe does his very best not only to cut the cost of operation, but to give the school child the best possible service. The bus schedules must be run right on time every day. The driver can help make this possible by giving his bus a visual inspection before each morning and afternoon run, by knowing how to spot troubles in the making before they cause serious trouble or a breakdown, and by helping to cut maintenance cost so that

additional money will be saved to help purchase new equipment.

There are many other troubles which drivers can help spot that have nothing to do with the school bus chassis. The troubles I am speaking of are on the school bus bodies, and in most cases the school bus mechanic is responsible for making the proper repairs on them. A few of these are: window stops out, which permit windows to drop all the way down and the children to put extremities out of windows; emergency door handle loose or missing on outside of bus so that door cannot be opened from outside in emergencies; mirrors poorly mounted on both sides of the bus, which may cause a blind spot on either the driver's right or left.

I have had school bus drivers tell me that they couldn't adjust the driver's seat properly because it was rusted or the adjustment device had been broken. A driver needs to be seated in the correct position in order to be able to operate his bus safely. He should be able to reach all controls easily without having to shift his position.

As I travel about the State of Florida conducting training programs for school bus drivers, I am constantly reminded of the many responsibilities school bus drivers have. They must be good drivers, disciplinarians, teachers, qualified to render first aid, public relations experts, mechanically inclined, and so forth.

I have found that they are one of the most dedicated groups a man could work with. The women drivers are just as anxious, if not more so than the men, to learn anything which will help them operate their buses better. I can well remember one morning about four years ago when I received a call that one of my buses, which was operated by a lady driver, was broken down about 12 miles out on a lonely country road. The driver said that she noticed the oil gauge had dropped suddenly and she was afraid to drive any farther for fear of ruining a good engine. Her prompt action saved us a practically new engine, as the plug in the bottom of the oil pan had come loose and most of the oil was gone.

On another occasion at the conclusion of one of our training programs I overheard a driver ask the route director what she could do to get the mechanic to fix the stop lights on her bus. She complained that she had taken her bus to the school bus garage several times and that the mechanic said that he just couldn't get them fixed. The director told her that she should continue to go back to the garage until the lights were fixed and that he didn't have anything to do with the mechanics of the bus.

After she walked away, still frustrated and very upset, the director turned to me and said, "These women get so upset over little things." I didn't hesitate to tell him that he was discouraging this little lady from wanting to maintain her bus properly.

Training drivers to look for mechanical troubles will pay off in safety and dollars. Why not take the time to include this type of program in your regular training sessions for school bus drivers?

New Device to Alert Driver

The growing number of accidents—often fatal—traced to drivers who have fallen asleep at the wheel has given rise to many devices to alert the drowsy driver. (See TRAFFIC SAFETY, March 1959, p. 12.) Some of these gadgets are activated when the driver fails to maintain a firm grip on the wheel, others sound off when the driver begins to nod.

Now comes a device—Driv-A-Lert—based on an entirely different approach to the problem. The principle of Driv-A-Lert is that the alert, attentive motorist is constantly making steering wheel corrections. But when a driver becomes drowsy, or his attention strays, he fails to take these corrective actions. The device is so designed that it will sound a horn when a driver fails to make a corrective action during a predetermined time interval.

Developed after three years of testing, the alerting device is composed of a *time control unit*, installed in a convenient place in the cab, and a *sensing unit* which is attached to the steering column just below the wheel. The sensing unit is made up of a small wheel which detects minute movements of the steering wheel and translates them into electronic signals that are passed on to the time control unit.

In operation, a cam on the steering wheel activates the sensing unit when normal driving movements are made, the sensing unit in turn activates the time control unit. When the time control is not constantly reactivated by normal steering movements, an alarm is sounded.

A number of Driv-A-Lert units are now in experimental use on commercial vehicles—both cars and trucks. The distributor, Hub Motor Sales of Syracuse, N. Y., has received letters from many of these drivers voicing their approval of the unit.

HOW TO CHOOSE THE MEN WHO DRIVE THE BIG RIGS

by T. A. Harrison

I'M SURE we can all agree on the qualifications of the ideal road driver. He is courteous and accident free on the road, enjoys his work and is always dependable and conscientious.

These five simple attributes aren't hard to find—ask any applicant and he'll assure you that he qualifies easily; but you and I know that without further investigation before, and motivation after, employment, chances are 100 to 1 he won't prove satisfactory.

These five prime requisites can be found in men with widely differing personalities, background, and experience, but we have found that there are many indications of these traits which can be discovered in our employe selection procedure.

Before we get beyond the five qualities which make the safety director's life a heaven on earth, let's get together on the definition of super-rigs. In the trucking business we are in the process of continual change. Ten years ago a super-rig in Ohio would have been a tractor powered by a 175 h/p diesel and a trailer 34 feet long.

In 1961, a super-rig consists of a tandem drive tractor powered by a 335 or 380 h/p diesel engine pulling two 40-foot tandem-axle trailers coupled with a tandem-axle dolly. These units are designed to pull the maximum gross load of 127,000 pounds up the largest turnpike grade at a speed greater than 22 m.p.h. These "king size" double bottoms roll on 34 tires and are about 96 feet long.

The Western Express Co. put three of these units into operation simultaneously on February 4, 1959, in a trial operation in cooperation with the New York State Thruway Authority and the Massachusetts Turnpike Authority. After an extended trial period, both of the toll road authorities were convinced that double bottoms were a complete success and gave long term authorization to qualifying carriers.

Entering this double bottom trial in Massachusetts and New York was quite an experience. We felt that the future of our industry would be greatly influenced by our success or failure in this trial. We knew that our reputation for safe operation would be in jeopardy because one double bottom accident would be spectacular and unusually newsworthy. The equipment was engineered for the job. The only problem that couldn't be solved with a slide rule was the selection of the double bottom drivers.

Our original double bottom driver teams were hand picked. They were the best of a good group of drivers who had proved their ability over many years in our organization.

After we made the selection and the "doubles" were in operation, we analyzed our choices and found that all of the men had two personality traits in common. Each was interested in doing his job well and each was amenable to instruction. To best illustrate our drivers' qualifications, I'll quickly outline our driver screening process.

Super-Rig Driver Qualifications — All of our double bottom drivers have qualified as road drivers in previous years. Our road driver requirements are:

1. Make satisfactory application.
   a. Employed continuously.
   b. Stability, no frequent job changes.
   c. Safe driving record with previous employers or safe auto driving record if not previously a commercial driver.
   d. Good personal background.
2. Satisfactory preliminary interview.
   a. Is applicant cooperative and unguarded in the discussion of his past?
   b. Does he seem to take instructions and guidance well, or is he a 'know-it-all'?
   c. Is he patient and easy going?
   d. Is he stable and solid citizen type?
3. Satisfactorily pass Interstate Commerce Commission physical examination.
4. Application is then investigated.
   a. We permit no variance from the information stated in application.
   b. Applicant's driving record is checked with state police files as well as with previous employers and here, too, a material misstatement disqualifies the applicant.
5. Re-interview of the applicant.
   a. Can minor variances between application and investigation be reconciled?
   b. How opinionated is this applicant?
   c. Has he some friends among our employees? If so, are they our better men?
6. Safety indoctrination (performed by interviewer).
   a. Review of our safety accomplishments.
   b. Description of our award program.
   c. We emphasize that we hire only men who can supervise themselves on the road.
   d. Review the accident procedure which must be followed by the driver in the event of an accident.
   e. During this indoctrination the interviewer is observing the manner in which the applicant accepts this instruction.

T. A. Harrison is vice president of operations, The Western Express Co.

7. Brief equipment familiarization (performed by interviewer).
   a. Here the applicant hooks, unhooks and goes through the gears. Here he is observed in action. He is instructed on at least one facet of the operation and again his attitude toward instruction is observed.

After all these preliminaries, the applicants who are chosen begin working productively and receive periodic instruction as their performance indicates.

The double bottom drivers have been through the procedure above and in addition must possess the following qualifications:

1. Two years of accident free experience with Western Express. We have found that our accident free drivers are almost without exception "easy on the equipment."
2. Must qualify for a New York Thruway Tandem Trailer Permit.
   a. Age—over 26.
   b. Medical certificate.
   c. At least five years' provable experience driving tractor-trailer combinations.
   d. Traffic violations:

      Points:

      Two years (maximum five)
      Three years (maximum seven)
      Four years (maximum eight)

      Accident record:

      Chargeable (preventable) maximum two in five years

      On road:

      maximum one in two years
      maximum three in five years

      Off road:

      maximum two in two years

      Maximum total two in two years
3. Must be amenable to instruction.
4. Must be actively interested in doing his job well.

The men who qualify under our program are off to a good start. But driving the big rigs is a big challenge. To meet it, a man must drive like a real pro, day in and day out.

Arthur J. Naquin Wins New Award

Arthur J. Naquin, safety counselor for the New Orleans Public Service Inc., has been named the first recipient of the newly established Browne-McHardy award for meritorious and distinguished service in the advancement of principles and practices in safety and loss prevention.

He received the award at a joint dinner meeting of the Delta Safety Society, its marine division and the New Orleans chapter of the American Society of Safety Engineers.

The award was presented to Naquin for his "distinguished service to the community through the advancement of those principles and practices which contribute the most toward the safety and welfare of our people and the betterment of our way of life."

Established several months ago by the Delta Safety Society, its marine section, the New Orleans chapter of the American Society of Safety Engineers and the Metropolitan New Orleans Safety Council, the award recognizes the work of individuals "who voluntarily give their time and service toward the advancement of safety, through the prevention of injury and property loss caused by accidents."

First vice-president of the Metropolitan New Orleans Safety Council, Naquin also serves as chairman of the Motor Transport Conference of the National Safety Council and of the accident prevention committee of the Edison Electric Institute in New York. He has been a member of the American Society of Safety Engineers since 1942, and assisted in organizing the New Orleans chapter in 1949.

Arthur J. Naquin

Naquin also was an organizer of the Metropolitan New Orleans Safety Council and of the Louisiana Safety Association.

MOTOR FLEET TRAINING OFFICERS NAMED

William J. Simon, safety director of the National Highway Users Conference, has been chosen chairman of the National Committee for Motor Fleet Supervisor Training.

Simon, who has been active in the safety field for many years, was elected at the group's annual meeting held recently at the new headquarters of the American Trucking Associations in Washington.

Goley D. Sontheimer, director of the ATA safety department was elected vice chairman and Amos E. Neyhart, administrative head of the Institute of Public Safety, Pennsylvania State University, was chosen secretary.

The national committee reported that during their past fiscal year a new record had been set for the number of training courses held and the number of safety supervisors trained.

During the past year, 50 courses or conferences in motor fleet supervisor training were conducted and more than 1,720 supervisors received the intensive schooling. These trainees are responsible for 154,431 drivers and 18,557 mechanics, it was reported.

The group also approved extensive revisions in the qualifications for certification as director of safety, safety supervisor and trainer of commercial drivers. The revisions clarify the types of traffic safety experience and education considered acceptable for certification and provide graduated credit for experience and education at various levels of activity in traffic safety and related fields.

A Study of Impact

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safety belts. These open-ended discussions were then judged in terms of five basic categories of value ranging from "very valuable" (vital, crucial) to "dangerous."

Indicated Value of Safety Belts

	Viewers		Non-Viewers	
	Before	After	Before	After
1. Very valuable (crucial)	37%	50%	27%	32%
2. Valuable but not always crucial	22	26	22	25
3. Helpful, but not necessary	14	6	13	7
4. Not much help	6	4	10	7
5. Dangerous	6	6	10	14
Miscellaneous	15	8	18	15

As a result of watching the program the most significant attitude change occurs in the "very valuable" category.

A man in Atlanta: "The program impressed me so greatly that we are going to have belts installed."

A woman in Boston: "I'd never thought much about them until CBS jolted me."

A man in Los Angeles: "They should be standard equipment. We hadn't been too aware of them before watching the program."

Whether these people will buy seat belts is problematical: *Before* the program, a man in Boston said, "Seat belts are tremendous—most of fatalities or serious injuries are caused by bodily impact"; to the question, "Is your car equipped with safety belts?" he answered, "No."

Perhaps the most interesting category is number 5, "dangerous." A small, but possibly influential group of drivers articulate *fears* concerning the safety belt. These drivers view safety belts as dangerous because they threaten to "trap" the victim within the car. Such fears reflect a magical hope on the part of this group to be "thrown clear" of the car in case of an accident or a wish for some grace which would allow them to escape the car "in the nick of time." The safety belt denies these instincts for escape.

A woman in Chicago: "I wouldn't have them. Cars catch fire and you are a goner wearing them."

A man in Los Angeles: "I do not *believe* in these. I think they are a hazard—difficult and sometimes impossible to get out of one in time of an accident."

A woman in Atlanta: "A person confined to one place might find it difficult to get away from a car accident."

Some of the other answers constitute an even greater strain on logic:

A woman in Boston: "When involved in an accident they are very important; otherwise, I don't know how valuable they are."

A woman in Atlanta: "There's the question of a broken neck. If you're kept pinned down, it can break your neck."

A man in Chicago: "If the car is smashed and the driver is locked in by a smashed door, it (safety belt) creates a hazard."

A man in Los Angeles: "If one was riding in a convertible or hard top, you'd get your head cut off wearing belts."

It may be that this group that thinks seat belts are dangerous is making overt some of the deep-seated feelings of those in the rest of the sample. Certainly for most people, the mental association of the seat belt is *not* with a car or safety but with accidents. Some fruitful research could and should be done to try to determine what lies behind such fierce resistance to seat belts, and how this resistance can be overcome.

Attitudes Toward Holiday Estimates

An area of safety propaganda that most people are aware of is the estimate of fatalities made preceding a holiday weekend. There is one area where before and after responses toward holiday estimates change as a result of the program:

	Viewers		Non-Viewers	
	Before	After	Before	After
"Feel it doesn't apply to me"	14	34	18	20

The significant change for viewers is in the area of "feel it doesn't apply to me." It has been pointed out that one effect of the program was to allow one to externalize the blame on others. It made it possible for viewers to see others—drunken drivers, etc.—as the causers and main victims of accidents. This is substantiated quite dramatically by the shift shown in the table above. The viewers tend to divorce themselves from the holiday estimates.

(It should be mentioned that there were almost no reactions expressing resentment of such estimates. Their effect, on the whole, is seen by the respondents as being beneficial.)

Respondents were asked to guess how many people are killed yearly as a result of automobile accidents. The results were:

Guesses About Accident Tolls

	Viewers		Non-Viewers	
Guess	Before	After	Before	After
Less than 1,000	9%	5%	16%	10%
1,000-10,000	30	27	29	32
10,000-25,000	11	10	9	13
25,000-45,000*	14	27	13	14
45,000-60,000	9	5	7	8
60,000-100,000	4	5	4	3
100,000-200,000	2	1	5	3
Over 200,000	5	2	3	2
Wouldn't venture a guess	16	18	14	15

For viewers the guesses within the correct range (25,000-45,000) increase substantially after viewing the program. For non-viewers these guesses remain the same and there is a greater general tendency to underguess. Looking at

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*There were 38,200 traffic fatalities in 1960.

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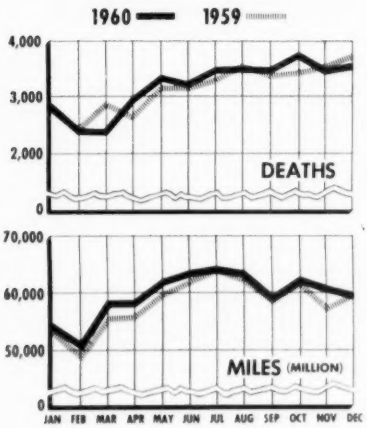
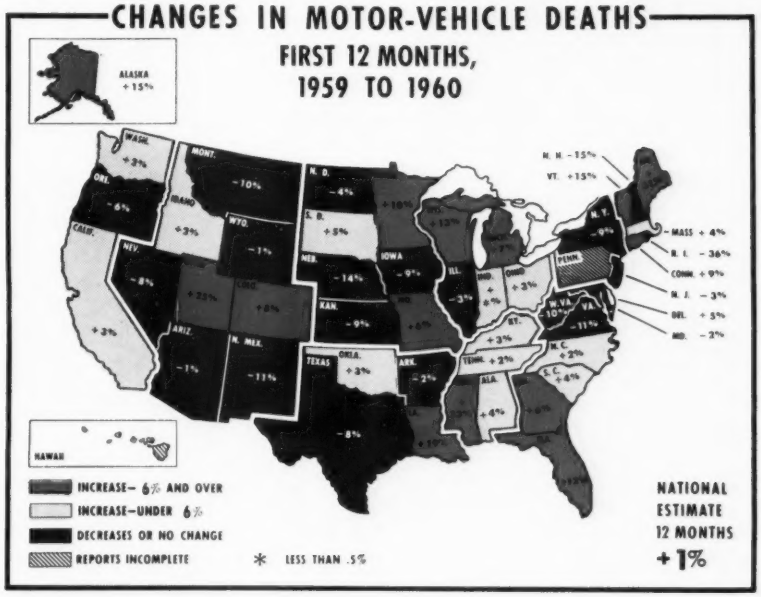
lation size group, ranked according to deaths per 10,000 registered vehicles were:

	Reg. Rate	*Pop. Rate*
Group I (Over 1,000,000)		
Chicago, Ill.	2.7	7.6
Los Angeles, Calif.	3.0	15.7
Detroit, Mich.	3.2	12.1
Group II (750,000 to 1,000,000)		
Houston, Tex.	2.0	9.2
Cleveland, Ohio	3.1	10.2
St. Louis, Mo.	3.2	12.5
Group III (500,000 to 750,000)		
Seattle, Wash.	1.5	8.3
Buffalo, N. Y.	1.9	8.4
Milwaukee, Wis.	2.0	7.1
Group IV (350,000 to 500,000)		
Fort Worth, Tex.	1.5	8.1
Portland, Ore.	2.1	13.7
Oakland, Calif.	2.2	10.1
Group V (200,000 to 350,000)		
Providence, R. I.	0.6	2.9
Wichita, Kan.	0.8	4.3
Miami, Fla.	1.4	8.9
Group VI (100,000 to 200,000)		
Topeka, Kan.	0.9	4.2
Portsmouth, Va.	0.9	2.6
Lincoln, Neb.	0.9	3.9
Group VII (50,000 to 100,000)		
Medford, Mass.	0.0	0.0
University City, Mo.	0.0	0.0
Passaic, N. J.	0.0	0.0
Group VIII (25,000 to 50,000)		
Plainfield, N. J.	0.0	0.0
Elmira, N. Y.	0.0	0.0
Highland Park, Mich.	0.0	0.0
Group IX (10,000 to 25,000)		
Longview, Wash.	0.0	0.0
Merced, Calif.	0.0	0.0
Lake Worth, Fla.	0.0	0.0

MONTHLY MOTOR VEHICLE DEATHS AND TRAFFIC TRENDS



CHANGES IN MOTOR-VEHICLE DEATHS FIRST 12 MONTHS, 1959 TO 1960



MOTOR VEHICLE DEATHS AND CHANGES

Months	DEATHS				PERCENTAGE CHANGES		
					Corresponding Months		4 Mos. Moving Ave.*
	1956	1958	1959	1960	1956-1960	1959-1960	1959-1960
January	2,954	2,709	2,824	2,880	— 3%	+ 2%	0%
February	2,652	2,398	2,401	2,370	—10%	— 1%	+ 1%
March	2,940	2,598	2,879	2,390	—19%	—17%	— 3%
April	2,970	2,595	2,680	2,950	— 1%	+10%	— 2%
May	3,094	2,937	3,199	3,330	+ 8%	+ 4%	— 1%
June	3,338	3,078	3,138	3,200	— 4%	+ 2%	0%
July	3,555	3,098	3,286	3,480	— 2%	+ 6%	+ 5%
August	3,535	3,550	3,502	3,460	— 2%	— 1%	+ 3%
September	3,653	3,325	3,381	3,480	— 5%	+ 3%	+ 2%
October	3,476	3,586	3,386	3,720	+ 7%	+10%	+ 4%
November	3,603	3,526	3,527	3,420	— 5%	— 3%	+ 2%
December	3,858	3,581	3,707	3,520	— 9%	— 5%	+ 1%
Total	39,628	36,981	37,910	38,200	— 4%	+ 1%	

All 1956, 1958, and 1959 figures are from the National Office of Vital Statistics. The 1960 figures are National Safety Council estimates.

The 1960 national estimate is arrived at by assuming that the percentage change from 1959 to 1960 in the states reporting for both years reflects the 1959-1960 change in the entire country. First reports are preliminary, so revisions are made from time to time as later reports are received for the various months. Thus, figures above for 1960 may differ slightly from figures for the same months which will be published in future issues of TRAFFIC SAFETY.

*Four Months Moving Average is based on changes between the totals for four months instead of one month. For example, the December figure shows the change between the totals for September-December 1959 and September-December 1960, etc. Adding several months together tends to smooth out single month changes which may be affected by differences in the number of week-ends in a month from one year to the next, random variations, etc.

TRAFFIC DEATHS—CITY RECORDS

The table covers only motor-vehicle deaths resulting from traffic accidents that occurred in the city. Nontraffic motor vehicle deaths (where the accident occurred on home or work premises) are not included; nor are deaths in the city from accidents occurring outside.

Rankings are based on the 1960 registration death rate which is the number of deaths per 10,000 registered motor vehicles on an annual basis. Vehicle registration figures are for the year 1960 and were supplied by R. L. Polk & Co.

Cities are ranked by registration death rates—from low to high. When two or more cities have exactly the same rate, ranking is by total vehicle registrations—from large to small.

Cities shown in heavy type have improved in 1960 compared with 1959.

The population death rate is the number of deaths per 100,000 population on an annual basis. Populations are as of the April 1, 1960 census taken by the U. S. Bureau of the Census.

	Twelve Months 1960	1959	1958	1960 Reg. Rate	1960 Pop. Rate
ALL REPORTING CITIES				2.3	9.2
Group I (1,000,000 and over)					
1. Chicago, Ill.	270	300	311	2.7	7.6
2. Los Angeles, Calif.	389	347	372	3.0	15.7
3. Detroit, Mich.	202	186	156	3.2	12.1
4. Philadelphia, Pa.	171	162	169	3.3	8.5
All cities in this group				3.3	9.3
5. New York, N. Y.	591	705	627	4.1	7.6
Group II (750,000 to 1,000,000)					
1. Houston, Tex.	86	109	83	2.0	9.2
All cities in this group				2.9	10.9
2. Cleveland, Ohio	89	96	95	3.1	10.2
3. St. Louis, Mo.	94	85	83	3.2	12.5
4. Baltimore, Md.	114	103	107	3.5	12.1
Group III (500,000 to 750,000)					
1. Seattle, Wash.	46	53	74	1.5	8.3
2. Buffalo, N. Y.	45	50	61	1.9	8.4
3. Milwaukee, Wis.	53	46	41	2.0	7.1
All cities in this group				2.5	9.8
4. Dallas, Tex.	81	72	73	2.6	11.9
5. Cincinnati, Ohio	59	54	59	2.7	11.7
6. San Francisco, Calif.	81	87	80	2.7	10.9
7. Boston, Mass.	47	63	58	2.7	6.7
8. San Antonio, Tex.	63	49	55	2.8	10.7
9. Pittsburgh, Pa.	60	56	69	3.0	9.9
10. San Diego, Calif.	72	80	90	3.2	12.6
Group IV (350,000 to 500,000)					
1. Fort Worth, Tex.	29	36	43	1.5	8.1
2. Portland, Ore.	51	52	44	2.1	13.7
3. Oakland, Calif.	37	50	45	2.2	10.1
4. Denver, Colo.	57	54	42	2.4	11.5
5. Minneapolis, Minn.	54	46	46	2.6	11.2
All cities in this group				2.7	12.0
6. Louisville, Ky.	49	53	52	2.8	12.5
7. Atlanta, Ga.	59	74	76	2.9	12.1
8. Memphis, Tenn.	54	45	31	2.9	10.9
9. Birmingham, Ala.	48	50	41	3.0	14.1
10. Phoenix, Ariz.	63	48	31	3.2	14.3
11. Kansas City, Mo.	63	54	36	4.2	13.2
Group V (200,000 to 350,000)					
1. Providence, R. I.	6	16	15	0.6	2.9
2. Wichita, Kan.	11	10	13	0.8	4.3
3. Miami, Fla.	26	46	43	1.4	8.9
4. Syracuse, N. Y.	12	12	13	1.4	5.6
5. Rochester, N. Y.	22	14	26	1.5	6.9
6. Des Moines, Iowa	17	17	17	1.7	8.1
7. Dayton, Ohio	27	25	24	1.8	10.3
8. Toledo, Ohio	29	19	20	1.8	9.1
9. Akron, Ohio	27	40	42	2.0	9.3
10. Tampa, Fla.	30	32	31	2.1	10.9
11. Norfolk, Va.	19	15	20	2.1	6.2
12. Tucson, Ariz.	24	16	9	2.2	11.3
13. Richmond, Va.	23	24	30	2.2	10.5
14. Albuquerque, N. M.	20	31	21	2.2	9.9
15. Omaha, Neb.	29	28	23	2.3	9.6
All cities in this group				2.3	10.8
16. St. Paul, Minn.	36	31	32	2.5	11.5
17. San Jose, Calif.	31	26	26	2.5	15.2
18. Oklahoma City, Okla.	56	31	24	3.0	17.3
19. El Paso, Tex.	29	42	47	3.2	10.5
20. Jacksonville, Fla.	47	25	37	3.7	23.4
21. Honolulu, Hawaii	42	19	25	3.7	14.3
22. Charlotte, N. C.	39	24	21	3.9	19.3
23. Mobile, Ala.	33	32	23	4.6	16.3
Group VI (100,000 to 200,000)					
1. Topeka, Kan.	5	11	10	0.9	4.2
2. Portsmouth, Va.	3	7	4	0.9	2.6
3. Lincoln, Neb.	5	7	6	0.9	3.9
4. Springfield, Mass.	6	9	15	1.0	3.4
5. Columbus, Ga.	5	12	8	1.0	4.3
6. Elizabeth, N. J.	4	9	10	1.1	3.7
7. Baton Rouge, La.	8	20	16	1.1	5.2
8. Berkeley, Calif.	6	11	10	1.1	5.4
9. Grand Rapids, Mich.	12	18	18	1.2	6.8
10. Evansville, Ind.	8	16	8	1.3	5.7
11. Lansing, Mich.	8	10	7	1.3	7.4
12. Spokane, Wash.	13	14	20	1.3	7.2
13. Fresno, Calif.	12	18	9	1.3	9.0
14. Erie, Pa.	9	6	5	1.3	6.5
15. Torrance, Calif.	7	11	7	1.3	6.9
16. Montgomery, Ala.	8	9	5	1.4	6.0
17. Winston Salem, N. C.	8	7	12	1.4	7.2
18. Trenton, N. J.	9	7	9	1.5	7.9
19. Santa Ana, Calif.	9	9	1	1.6	9.0
20. Rockford, Ill.	11	4	10	1.6	8.7
21. Little Rock, Ark.	9	11	13	1.6	8.3
22. Yonkers, N. Y.	9	2	8	1.6	4.7
23. Dearborn, Mich.	10	12	25	1.6	8.9
24. Greensboro, N. C.	9	13	18	1.6	7.5
25. Savannah, Ga.	10	13	7	1.7	6.7
26. Glendale, Calif.	10	11	6	1.7	8.4
27. Madison, Wis.	10	8	6	1.7	7.9
28. Pasadena, Calif.	12	13	14	1.7	10.3
29. Peoria, Ill.	10	7	6	1.8	9.7
30. Austin, Tex.	14	18	9	1.8	7.5
31. Knoxville, Tenn.	10	7	8	1.9	8.9
32. Tacoma, Wash.	17	10	14	1.9	11.5
33. South Bend, Ind.	13	4	9	1.9	9.8
34. Utica, N. Y.	7	6	5	1.9	7.0
35. Sacramento, Calif.	25	30	18	1.9	13.0
All cities in this group				1.9	9.1
36. Amarillo, Tex.	12	10	2	2.0	8.7
37. Beaumont, Tex.	10	18	9	2.0	8.4
38. Corpus Christi, Tex.	14	7	21	2.0	8.3
39. Canton, Ohio	15	9	8	2.0	11.4
40. Salt Lake City, Utah	25	20	22	2.1	13.2
41. Niagara Falls, N. Y.	8	5	8	2.1	7.8
42. Gary, Ind.	15	14	15	2.1	8.4
43. Fort Wayne, Ind.	18	17	8	2.2	11.1
44. Allentown, Pa.	11	11	7	2.2	10.2
45. Flint, Mich.	25	13	11	2.3	12.7
46. Nashville, Tenn.	19	16	22	2.3	11.1
47. Newport News, Va.	8	6	14	2.4	7.0
48. New Haven, Conn.	14	9	6	2.5	9.2
49. Duluth, Minn.	12	10	21	2.6	11.2
50. Youngstown, Ohio	13	20	12	2.8	7.8
51. Cambridge, Mass.	8	6	8	2.8	7.4
52. Lubbock, Tex.	17	25	10	2.9	13.2
53. Anaheim, Calif.	16	24	2	2.9	15.4
54. Jackson, Miss.	19	14	7	3.0	13.2
55. Shreveport, La.	24	17	8	3.0	14.6
56. St. Petersburg, Fla.	37	25	21	3.3	20.4
57. Hammond, Ind.	14	14	20	3.7	12.5
58. Wichita Falls, Tex.	16	9	8	4.0	15.7
59. Chattanooga, Tenn.	29	23	20	4.6	22.3
Group VII (50,000 to 100,000)					
1. Medford, Mass.	0	1	6	0.0	0.0
2. University City, Mo.	0	1	4	0.0	0.0
3. Passaic, N. J.	0	2	2	0.0	0.0
4. Cedar Rapids, Iowa	1	3	4	0.2	1.1
5. San Mateo, Calif.	1	3	4	0.3	1.4
6. Tyler, Tex.	1	6	2	0.3	2.0
7. Mt. Vernon, N. Y.	1	3	2	0.3	1.3
8. White Plains, N. Y.	1	4	3	0.4	2.0
9. East Orange, N. J.	1	3	4	0.4	1.3
10. Schenectady, N. Y.	2	4	4	0.4	2.4
11. West Covina, Calif.	1	0	4	0.5	2.0
12. Joliet, Ill.	2	3	8	0.5	3.0
13. Palo Alto, Calif.	2	6	0	0.6	3.8
14. Eugene, Ore.	2	4	4	0.6	3.9
15. Kenosha, Wis.	2	11	2	0.6	2.9
16. Bethlehem, Pa.	2	3	0	0.6	2.7
17. Billings, Mont.	2	4	2	0.6	3.8
18. Colorado Spgs., Colo.	3	4	4	0.6	4.3
19. Lexington, Ky.	2	5	4	0.6	3.2
20. St. Clair Shores, Mich.	2	4	4	0.7	2.6
21. Vallejo, Calif.	2	11	3	0.7	3.3
22. Evanston, Ill.	2	0	0	0.7	2.5
23. New Rochelle, N. Y.	2	3	3	0.7	2.6
24. Wilmington, Del.	4	8	10	0.7	4.2
25. Binghamton, N. Y.	3	4	3	0.8	4.0
26. Hayward, Calif.	4	6	8	0.8	5.5
27. Council Bluffs, Iowa	2	6	4	0.8	3.7
28. Santa Monica, Calif.	4	7	9	0.9	4.8
29. Warwick, R. I.	2	5	6	0.9	2.9
30. Decatur, Ill.	4	9	14	0.9	5.1
31. Rock Island, Ill.	2	6	4	1.0	3.9
32. Springfield, Ohio	4	8	6	1.0	4.8
33. Sioux Falls, S. D.	3	5	3	1.0	4.6
34. Euclid, Ohio	2	1	5	1.0	3.2
35. Pawtucket, R. I.	3	6	2	1.1	3.7
36. Lakewood, Calif.	3	7	4	1.1	4.5
37. Great Falls, Mont.	3	2	5	1.1	5.4
38. Saginaw, Mich.	6	5	6	1.1	6.1
39. San Leandro, Calif.	4	6	8	1.1	6.1
40. Pensacola, Fla.	4	4	5	1.1	7.0
41. Alexandria, Va.	5	9	4	1.1	5.5
42. Odessa, Tex.	5	6	4	1.2	6.2
43. Lakewood, Ohio	3	5	6	1.2	4.5
44. Wilkes-Barre, Pa.	4	4	6	1.2	6.3
45. Richmond, Calif.	4	9	5	1.2	5.6
46. Aurora, Ill.	4	6	3	1.3	6.3
47. Pasadena, Tex.	3	3	5	1.3	5.1
48. Springfield, Ill.	6	4	6	1.3	7.2
49. Reno, Nev.	5	3	8	1.4	9.7
50. Irvington, N. J.	3	2	2	1.4	5.1
51. Parma, Ohio	3	0	2	1.4	3.6
52. Waterloo, Iowa	5	7	10	1.4	7.0
53. Fullerton, Calif.	3	3	6	1.5	5.3
54. Reading, Pa.	7	7	8	1.5	7.1
55. Royal Oak, Mich.	6	11	1	1.5	7.4
56. Fort Lauderdale, Fla.	8	5	7	1.5	9.6
57. Stamford, Conn.	5	6	4	1.5	5.4
58. Bloomfield, N. J.	3	1	0	1.5	5.8
59. Hamilton, Ohio	6	8	8	1.5	8.3
60. Roanoke, Va.	7	8	8	1.6	7.2
61. Muncie, Ind.	6	12	3	1.6	8.7
62. Orlando, Fla.	9	11	0	1.6	10.2
63. Midland, Tex.	5	1	5	1.6	8.0
64. Lake Charles, La.	5	6	5	1.6	7.9
65. Roseville, Mich.	3	8	3	1.7	6.0
66. Sioux City, Iowa	6	17	9	1.7	6.7
67. Chicopee, Mass.	3	4	2	1.7	4.9
68. Columbia, S. C.	9	7	5	1.8	9.2
69. Compton, Calif.	8	8	10	1.8	11.1
70. Tuscaloosa, Ala.	4	9	3	1.8	6.3
All cities in this group				1.8	8.2
71. Lynn, Mass.	5	9	5	1.9	5.3
72. Waukegan, Ill.	5	5	2	1.9	9.0
73. Pittsfield, Mass.	4	6	3	1.9	6.9
74. Bay City, Mich.	6	4	3	2.0	11.2
75. Abilene, Tex.	8	7	2	2.0	8.8
76. Ann Arbor, Mich.	6	1	3	2.0	8.9
77. Racine, Wis.	8	2	2	2.1	9.0
78. Fort Smith, Ark.	5	12	11	2.1	9.4
79. Waltham, Mass.	4	4	3	2.1	7.2
80. Durham, N. C.	8	9	9	2.1	10.2
81. Jackson, Mich.	6	5	3	2.1	11.8
82. Portland, Maine	6	3	8	2.1	8.3
83. Oak Park, Ill.	5	1	3	2.1	8.2
84. Pontiac, Mich.	10	9	15	2.2	12.2
85. Terre Haute, Ind.	8	4	6	2.2	11.0
86. St. Joseph, Mo.	7	12	2	2.2	8.8
87. Arlington, Mass.	4	1	1	2.2	8.0
88. Lancaster, Pa.	7	3	3	2.2	11.5
89. Lynchburg, Va.	5	3	9	2.2	9.1
90. Augusta, Ga.	8	5	5	2.3	11.3
91. Asheville, N. C.	7	4	4	2.3	11.6
92. Wheeling, W. Va.	5	2	6	2.3	9.4
93. Berwyn, Ill.	6	2	4	2.3	11.1
94. Lwr. Merion Twp., Pa.	5	4	3	2.3	8.4
95. Huntington, W. Va.	8	7	6	2.3	9.6
96. Dubuque, Iowa	5	1	0	2.3	8.8
97. Alameda, Calif.	5	6	1	2.4	8.2
98. Burbank, Calif.	12	13	9	2.4	13.3
99. Lawton, Okla.	5	5	3	2.4	8.1
100. Kalamazoo, Mich.	11	3	4	2.4	13.4
101. Manchester, N. H.	7	6	4	2.4	7.9
102. Bayonne, N. J.	5	3	2	2.5	6.7
103. Lincoln Park, Mich.	5	3	4	2.5	9.3

	Twelve Months 1960	1959	1958	1960 Reg. Rate	1960 Pop. Rate
104. West Allis, Wis.	5	4	5	2.6	7.3
105. Livonia, Mich.	**7**	**8**	**6**	**2.7**	**10.5**
106. Lorain, Ohio	8	1	7	2.7	11.6
107. Riverside, Calif.	13	12	6	2.7	15.4
108. Raleigh, N. C.	13	4	6	2.7	13.8
109. Wauwatosa, Wis.	6	2	2	2.7	10.5
110. Gadsden, Ala.	8	4	6	2.8	13.8
111. Covington, Ky.	7	3	3	2.8	11.6
112. San Bernardino, Calif.	**17**	**23**	**20**	**2.8**	**18.5**
113. Kettering, Ohio	4	0	0	2.8	7.3
114. East Chicago, Ind.	5	3	5	2.9	8.7
115. San Angelo, Tex.	8	6	4	2.9	13.6
116. Brockton, Mass.	**7**	**8**	**9**	**2.9**	**9.6**
117. Charleston, S. C.	**6**	**7**	**4**	**2.9**	**9.1**
118. Miami Beach, Fla.	9	7	7	2.9	14.3
119. Hampton, Va.	**8**	**9**	**15**	**3.0**	**9.0**
120. Springfield, Mo.	14	9	3	3.0	14.6
121. Las Vegas, Nev.	14	5	4	3.1	21.7
122. Stockton, Calif.	18	13	14	3.1	20.9
123. Warren, Mich.	12	12	8	3.2	13.5
124. Santa Clara, Calif.	8	5	7	3.3	13.6
125. Waco, Tex.	16	13	6	3.3	16.4
126. Pomona, Calif.	11	5	11	3.3	16.4
127. Charleston, W. Va.	**10**	**13**	**11**	**3.3**	**11.7**
128. Warren, Ohio	12	6	5	3.6	20.1
129. Greenville, S. C.	13	5	4	3.8	19.6
130. Greenwich, Conn.	**6**	**8**	**3**	**3.8**	**11.2**
131. Brookline, Mass.	7	5	9	4.0	13.0
132. High Point, N. C.	12	2	5	4.1	19.3
133. Santa Barbara, Calif.	17	7	7	4.3	28.9
134. Bloomington, Minn.	7	2	6	4.5	13.9
135. Atlantic City, N. J.	8	6	10	5.2	13.4

Group VIII (25,000 to 50,000)

1. Plainfield, N. J.	**0**	**4**	**3**	**0.0**	**0.0**
2. Elmira, N. Y.	**0**	**1**	**0**	**0.0**	**0.0**
3. Highland Park, Mich.	**0**	**9**	**4**	**0.0**	**0.0**
4. Eau Clair, Wis.	**0**	**2**	**2**	**0.0**	**0.0**
5. Boulder, Colo.	**0**	**1**	**1**	**0.0**	**0.0**
6. Granite City, Ill.	**0**	**2**	**1**	**0.0**	**0.0**
7. Greeley, Colo.	**0**	**1**	**2**	**0.0**	**0.0**
8. Ferndale, Mich.	**0**	**2**	**3**	**0.0**	**0.0**
9. Manhattan Bch., Calif.	**0**	**2**	**0**	**0.0**	**0.0**
10. Galesburg, Ill.	**0**	**4**	**3**	**0.0**	**0.0**
11. Bartlesville, Okla.	0	0	4	0.0	0.0
12. Findlay, Ohio	**0**	**3**	**2**	**0.0**	**0.0**
13. Minot, N. D.	**0**	**2**	**0**	**0.0**	**0.0**
14. Edina, Minn.	0	0	0	0.0	0.0
15. Rock Hill, S. C.	**0**	**3**	**2**	**0.0**	**0.0**
16. Park Ridge, Ill.	0	0	1	0.0	0.0
17. Fond du Lac, Wis.	**0**	**1**	**2**	**0.0**	**0.0**
18. Fair Lawn, N. J.	**0**	**1**	**2**	**0.0**	**0.0**
19. Steubenville, Ohio	**0**	**2**	**4**	**0.0**	**0.0**
20. Lockport, N. Y.	**0**	**1**	**3**	**0.0**	**0.0**
21. Kirkwood, Mo.	**0**	**1**	**1**	**0.0**	**0.0**
22. Norman, Okla.	**0**	**2**	**2**	**0.0**	**0.0**
23. Sherman, Tex.	**0**	**1**	**1**	**0.0**	**0.0**
24. Mt. Clemens, Mich.	0	0	3	0.0	0.0
25. Middletown, Conn.	**0**	**2**	**4**	**0.0**	**0.0**
26. Oak Ridge, Tenn.	**0**	**3**	**2**	**0.0**	**0.0**
27. Maple Heights, Ohio	**0**	**2**	**0**	**0.0**	**0.0**
28. Wilmette, Ill.	**0**	**2**	**2**	**0.0**	**0.0**
29. East Lansing, Mich.	**0**	**4**	**2**	**0.0**	**0.0**
30. Mt. Lebanon, Pa.	**0**	**3**	**1**	**0.0**	**0.0**
31. Park Forest, Ill.	0	0	0	0.0	0.0
32. Belmont, Mass.	**0**	**1**	**0**	**0.0**	**0.0**
33. Lackawanna, N. Y.	0	0	1	0.0	0.0
34. Cheyenne, Wyo.	**1**	**4**	**1**	**0.3**	**2.3**
35. Casper, Wyo.	**1**	**2**	**1**	**0.4**	**2.6**
36. Newark, Ohio	1	0	5	0.4	2.4
37. Whittier, Calif.	**1**	**2**	**2**	**0.4**	**3.0**
38. Wilmington, N. C.	**1**	**4**	**3**	**0.4**	**2.3**
39. Appleton, Wis.	**1**	**5**	**1**	**0.4**	**2.1**
40. Englewood, Colo.	1	1	1	0.4	3.0
41. Salina, Kan.	**1**	**2**	**1**	**0.4**	**2.3**
42. Vancouver, Wash.	**1**	**2**	**4**	**0.5**	**3.1**
43. Fargo, N. D.	1	0	4	0.5	2.1
44. Gainesville, Fla.	1	1	3	0.5	3.4
45. Marion, Ohio	**1**	**3**	**5**	**0.5**	**2.7**
46. Bloomington, Ind.	**1**	**3**	**0**	**0.5**	**3.2**
47. Montebello, Calif.	**1**	**2**	**3**	**0.5**	**3.1**
48. Portsmouth, Ohio	1	1	3	0.5	3.0
49. Mountain View, Calif.	**1**	**3**	**4**	**0.6**	**3.2**
50. Sandusky, Ohio	**1**	**2**	**8**	**0.6**	**3.1**
51. Rome, Ga.	1	1	2	0.6	3.1
52. South Euclid, Ohio	**1**	**2**	**0**	**0.6**	**3.6**
53. Westfield, N. J.	1	0	2	0.6	3.2
54. Easton, Pa	**1**	**2**	**1**	**0.6**	**3.1**
55. Jackson, Tenn.	**1**	**2**	**1**	**0.6**	**3.0**
56. Ft. Pierce, Fla.	**1**	**8**	**5**	**0.6**	**4.0**
57. Baldwin Park, Calif.	**1**	**3**	**2**	**0.6**	**2.9**
58. Redwood City, Calif.	2	1	3	0.6	4.3
59. Lawrence, Kan.	1	0	1	0.7	3.0
60. Grand Island, Neb.	**1**	**2**	**2**	**0.7**	**3.9**
61. Mason City, Iowa	**1**	**3**	**5**	**0.7**	**3.3**
62. Richfield, Minn.	**1**	**4**	**2**	**0.7**	**2.4**
63. Bangor, Maine	**1**	**3**	**3**	**0.7**	**2.6**
64. Austin, Minn.	1	0	1	0.7	3.6
65. Anderson, Ind.	**2**	**4**	**3**	**0.7**	**4.1**

	Twelve Months 1960	1959	1958	1960 Reg. Rate	1960 Pop. Rate
66. Provo, Utah	**1**	**2**	**2**	**0.7**	**2.8**
67. Redlands, Calif.	1	1	3	0.7	3.7
68. Port Chester, N. Y.	1	1	1	0.7	4.0
69. Bismarck, N. D.	**1**	**2**	**1**	**0.7**	**3.6**
70. Mansfield, Ohio	**2**	**4**	**3**	**0.8**	**4.2**
71. Ames, Iowa	1	0	1	0.8	3.7
72. Watertown, Mass.	**1**	**3**	**0**	**0.8**	**2.6**
73. Webster Groves, Mo.	1	0	0	0.8	5.4
74. Madison Hgts., Mich.	**1**	**2**	**1**	**0.8**	**3.0**
75. Lewiston, Maine	**1**	**2**	**2**	**0.8**	**2.5**
76. El Cerrito, Calif.	1	0	1	0.8	5.9
77. Denton, Tex.	**1**	**3**	**0**	**0.8**	**3.7**
78. Hutchinson, Kan.	2	1	2	0.9	5.3
79. Urbana, Ill.	1	0	0	0.9	3.7
80. Quincy, Ill.	**2**	**7**	**7**	**0.9**	**4.6**
81. Poughkeepsie, N. Y.	2	2	2	0.9	5.2
82. Cranford, N. J.	1	1	0	1.0	3.8
83. Pocatello, Idaho	**2**	**3**	**7**	**1.0**	**7.0**
84. Des Plaines, Ill.	**2**	**5**	**2**	**1.0**	**5.7**
85. Yakima, Wash.	3	1	3	1.1	6.9
86. Boise, Idaho	3	0	0	1.2	8.7
87. Beloit, Wis.	2	1	3	1.2	6.1
88. Barberton, Ohio	2	0	10	1.2	5.9
89. Teaneck, N. J.	2	2	5	1.2	4.8
90. Everett, Wash.	**3**	**5**	**4**	**1.2**	**7.4**
91. Burlington, N. C.	2	2	1	1.2	6.0
92. Wausau, Wis.	2	2	1	1.2	6.3
93. Lafayette, Ind.	3	2	1	1.2	7.1
94. West Orange, N. J.	**2**	**3**	**5**	**1.2**	**5.0**
95. Monrovia, Calif.	**2**	**4**	**1**	**1.2**	**7.4**
96. Bloomington, Ill.	2	2	1	1.2	5.5
97. Aurora, Colo.	3	3	1	1.3	6.2
98. Waukesha, Wis.	**2**	**3**	**0**	**1.3**	**6.7**
99. Columbia, Mo.	**2**	**3**	**0**	**1.3**	**5.4**
100. Burlington, Iowa	2	0	2	1.3	6.2
101. Kankakee, Ill.	2	2	0	1.3	7.2
102. Hollywood, Fla.	**3**	**4**	**1**	**1.3**	**8.5**
103. Maywood, Ill.	2	1	1	1.3	7.3
104. Clearwater, Fla.	3	3	4	1.4	8.6
105. Owensboro, Ky.	3	1	2	1.4	7.1
106. Allen Park, Mich.	**2**	**3**	**3**	**1.4**	**5.4**
107. Manitowoc, Wis.	2	0	4	1.4	6.2
108. Kearny, N. J.	**2**	**6**	**2**	**1.4**	**5.3**
109. Rochester, Minn.	3	0	3	1.4	7.4
110. Birmingham, Mich.	2	1	0	1.4	7.8
111. Richmond, Ind.	3	2	2	1.4	6.8
All cities in this group				1.4	6.9
112. Cuyahoga Falls, Ohio	3	2	4	1.5	6.3
113. Beverly Hills, Calif.	**3**	**8**	**1**	**1.5**	**9.7**
114. Hackensack, N. J.	2	2	2	1.5	6.6
115. Garfield Hgts., Ohio	2	1	7	1.5	5.2
116. Burlington, Vt.	**2**	**3**	**0**	**1.5**	**5.6**
117. Oshkosh, Wis.	3	2	5	1.5	6.7
118. Brownsville, Tex.	**2**	**3**	**5**	**1.5**	**4.2**
119. Muskegon, Mich.	4	3	3	1.5	8.6
120. Sheboygan, Wis.	3	1	0	1.5	6.6
121. Ventura, Calif.	3	3	3	1.5	10.3
122. Danville, Va.	3	2	6	1.5	6.4
123. Kingsport, Tenn.	2	1	0	1.6	7.6
124. Grand Forks, N. D.	2	2	0	1.6	5.8
125. Kokomo, Ind.	**4**	**6**	**4**	**1.6**	**8.5**
126. East Detroit, Mich.	3	2	0	1.6	6.6
127. Freeport, Ill.	2	1	3	1.6	7.5
128. Amsterdam, N. Y.	2	1	3	1.6	6.9
129. Rahway, N. J.	2	2	1	1.6	7.2
130. Hagerstown, Md.	3	2	4	1.7	8.2
131. Ontario, Calif.	5	5	4	1.7	10.7
132. Elkhart, Ind.	4	1	3	1.7	9.0
133. Linden, N. J.	3	1	5	1.7	7.5
134. Carlsbad, N. M.	**2**	**3**	**1**	**1.7**	**7.8**
135. Santa Cruz, Calif.	3	3	4	1.7	11.7
136. East Cleveland, Ohio	3	1	1	1.8	7.9
137. Bellflower, Calif.	**4**	**5**	**—**	**1.8**	**8.9**
138. Elyria, Ohio	4	0	3	1.8	9.1
139. Danbury, Conn.	3	1	3	1.8	7.6
140. Woonsocket, R. I.	**3**	**6**	**1**	**1.8**	**6.4**
141. North Miami, Fla.	2	2	0	1.8	7.0
142. Daytona Beach, Fla.	**4**	**7**	**4**	**1.8**	**10.7**
143. Orange, Calif.	3	1	3	1.8	11.4
144. La Crosse, Wis.	4	4	4	1.9	8.4
145. Enid, Okla.	4	3	1	1.9	10.3
146. Big Spring, Tex.	3	3	3	1.9	9.6
147. Moline, Ill.	**4**	**5**	**9**	**1.9**	**9.4**
148. Fairfield, Conn.	**3**	**8**	**6**	**2.0**	**6.5**
149. La Messa, Calif.	**4**	**5**	**1**	**2.0**	**13.2**
150. Champaign, Ill.	4	1	2	2.0	8.1
151. St. Louis Park, Minn.	4	3	0	2.0	9.2
152. Modesto, Calif.	5	1	7	2.0	13.7
153. Calumet City, Ill.	**2**	**7**	**8**	**2.1**	**8.0**
154. Bellingham, Wash.	4	0	3	2.1	11.5
155. Chula Vista, Calif.	5	4	4	2.1	11.0
156. Muskogee, Okla.	**4**	**6**	**2**	**2.1**	**10.5**
157. Petersburg, Va.	3	1	1	2.1	8.2
158. Spartanburg, S. C.	**5**	**7**	**2**	**2.2**	**11.3**
159. Mesa, Ariz.	**4**	**5**	**1**	**2.2**	**11.8**
160. Wyandotte, Mich.	4	1	2	2.3	9.2
161. Pine Bluff, Ark.	5	2	2	2.3	11.4
162. Janesville, Wis.	4	2	3	2.3	11.4
163. Manchester, Conn.	**4**	**6**	**4**	**2.4**	**9.5**
164. Concord, N. H.	3	3	3	2.4	10.3

	Twelve Months 1960	1959	1958	1960 Reg. Rate	1960 Pop. Rate
165. Zanesville, Ohio	5	3	3	2.4	12.8
166. Hamden, Conn.	**3**	**5**	**3**	**2.4**	**7.3**
167. Tallahassee, Fla.	7	0	5	2.6	14.5
168. Wyoming, Mich.	**5**	**7**	**2**	**2.6**	**10.9**
169. Oxnard, Calif.	6	3	2	2.7	14.9
170. St. Cloud, Minn.	4	3	2	2.7	12.9
171. Middletown, Ohio	6	6	7	2.7	14.3
172. Oceanside, Calif.	3	3	6	2.7	12.0
173. Iowa City, Iowa	4	2	2	2.8	12.0
174. Battle Creek, Mich.	7	2	2	2.8	15.8
175. Alton, Ill.	5	5	5	2.8	11.6
176. Elgin, Ill.	7	4	5	2.9	14.2
177. Hazel Park, Mich.	3	0	2	2.9	11.7
178. Coral Gables, Fla.	**5**	**6**	**7**	**2.9**	**14.4**
179. Leominster, Mass.	3	2	2	3.2	10.8
180. National City, Calif.	5	3	4	3.2	15.2
181. Fitchburg, Mass.	5	4	1	3.4	11.6
182. Michigan City, Ind.	6	0	6	3.4	16.3
183. Port Huron, Mich.	7	4	2	3.5	19.4
184. Las Cruces, N. M.	4	0	3	3.5	13.6
185. Hamtramck, Mich.	5	2	3	3.5	14.7
186. New London, Conn.	4	4	4	3.5	11.7
187. Temple, Tex.	5	5	5	3.6	16.4
188. Elmhurst, Ill.	7	1	3	3.9	18.9
189. Fremont, Calif.	7	5	11	4.0	16.0
190. Mishawaka, Ind.	7	1	0	4.0	21.0
191. Goldsboro, N. C.	6	6	2	4.1	20.8
192. Shaker Heights, Ohio	5	0	6	4.2	13.7
193. Highland Park, Ill.	5	3	1	4.7	19.6
194. Attleboro, Mass.	**4**	**5**	**3**	**5.0**	**14.8**
195. Superior, Wis.	6	3	1	5.1	17.9
196. Vineland, N. J.	9	5	9	5.4	23.9
197. Southgate, Mich.	7	1	2	6.0	23.8
198. Southfield, Mich.	8	4	4	6.0	25.4
199. Revere, Mass.	7	6	3	6.3	17.5

Group IX (10,000 to 25,000)

1. Longview, Wash.	**0**	**3**	**3**	**0.0**	**0.0**
2. Merced, Calif.	**0**	**4**	**3**	**0.0**	**0.0**
3. Lake Worth, Fla.	**0**	**2**	**3**	**0.0**	**0.0**
4. Los Altos, Calif.	**0**	**3**	**0**	**0.0**	**0.0**
5. New Kensington, Pa.	**0**	**3**	**1**	**0.0**	**0.0**
6. Anapolis, Md.	**0**	**1**	**2**	**0.0**	**0.0**
7. Lombard, Ill.	0	0	0	0.0	0.0
8. Great Bend, Kan.	0	0	1	0.0	0.0
9. North Platte, Neb.	0	0	0	0.0	0.0
10. Richland, Wash.	0	0	1	0.0	0.0
11. Escondido, Calif.	**0**	**1**	**0**	**0.0**	**0.0**
12. Salisbury, N. C.	**0**	**2**	**1**	**0.0**	**0.0**
13. Butler, Pa.	**0**	**2**	**1**	**0.0**	**0.0**
14. Frederick, Md.	0	0	0	0.0	0.0
15. Muscatine, Iowa	0	0	1	0.0	0.0
16. Pittsburg, Kan.	**0**	**1**	**0**	**0.0**	**0.0**
17. Endicott, N. Y.	0	0	1	0.0	0.0
18. Traverse City, Mich.	0	0	0	0.0	0.0
19. Westport, Conn.	**0**	**3**	**2**	**0.0**	**0.0**
20. Muskegon Hts., Mich.	**0**	**5**	**0**	**0.0**	**0.0**
21. Emporia, Kan.	0	0	0	0.0	0.0
22. Statesville, N. C.	0	0	3	0.0	0.0
23. Hibbing, Minn.	0	0	0	0.0	0.0
24. Glenview, Ill.	**0**	**1**	**1**	**0.0**	**0.0**
25. Ashland, Ohio	**0**	**1**	**1**	**0.0**	**0.0**
26. Wooster, Ohio	**0**	**3**	**1**	**0.0**	**0.0**
27. Kennewick, Wash.	**0**	**5**	**0**	**0.0**	**0.0**
28. Shorewood, Wis.	0	0	2	0.0	0.0
29. Valparaiso, Ind.	0	0	1	0.0	0.0
30. Greensburg, Pa.	**0**	**1**	**0**	**0.0**	**0.0**
31. El Dorado, Kan.	**0**	**2**	**0**	**0.0**	**0.0**
32. Pasco, Wash.	**0**	**1**	**1**	**0.0**	**0.0**
33. Arkansas City, Kan.	**0**	**2**	**0**	**0.0**	**0.0**
34. McAlester, Okla.	**0**	**1**	**1**	**0.0**	**0.0**
35. Mt. Pleasant, Mich.	0	0	1	0.0	0.0
36. Pendleton, Ore.	**0**	**2**	**0**	**0.0**	**0.0**
37. Faribault, Minn.	**0**	**2**	**1**	**0.0**	**0.0**
38. Morton Grove, Ill.	0	0	1	0.0	0.0
39. Owatonna, Minn.	0	0	0	0.0	0.0
40. Lamesa, Tex.	**0**	**1**	**0**	**0.0**	**0.0**
41. Niles, Mich.	**0**	**2**	**1**	**0.0**	**0.0**
42. Fergus Falls, Minn.	0	0	0	0.0	0.0
43. Auburn, Wash.	0	0	0	0.0	0.0
44. Hawthorne, N. J.	**0**	**2**	**0**	**0.0**	**0.0**
45. Tracy, Calif.	0	0	0	0.0	0.0
46. Massena, N. Y.	**0**	**1**	**2**	**0.0**	**0.0**
47. Waynesboro, Va.	**0**	**1**	**1**	**0.0**	**0.0**
48. State College, Pa.	0	0	0	0.0	0.0
49. Canton, Ill.	**0**	**2**	**0**	**0.0**	**0.0**
50. Mamaroneck, N. Y.	**0**	**3**	**0**	**0.0**	**0.0**
51. Grosse Pt. Wds., Mich.	0	0	0	0.0	0.0
52. Winfield, Kan.	**0**	**1**	**1**	**0.0**	**0.0**
53. Moses Lake, Wash.	0	0	1	0.0	0.0
54. Galion, Ohio	0	0	1	0.0	0.0
55. Winnetka, Ill.	**0**	**1**	**1**	**0.0**	**0.0**
56. Beaver Dam, Wis.	**0**	**1**	**0**	**0.0**	**0.0**
57. Menasha, Wis.	0	0	1	0.0	0.0
58. Albany, Calif.	**0**	**1**	**1**	**0.0**	**0.0**
59. Albion, Mich.	0	0	1	0.0	0.0
60. Bay Village, Ohio	0	0	1	0.0	0.0
61. Los Alamos, N. M.	**0**	**2**	**0**	**0.0**	**0.0**
62. Fairfield, Ala.	0	0	0	0.0	0.0

	Twelve Months 1960	1959	1958	1960 Reg. Rate	1960 Pop. Rate
63. Northbrook, Ill.	0	0	0	0.0	0.0
64. Bowling Green, Ohio	**0**	**1**	**1**	**0.0**	**0.0**
65. Van Wert, Ohio	0	0	2	0.0	0.0
66. Fairfield, Calif.	0	0	0	0.0	0.0
67. Pacific Grove, Calif.	0	0	0	0.0	0.0
68. Marion, Iowa	**0**	**2**	**0**	**0.0**	**0.0**
69. Grosse Pte. Pk., Mich.	0	0	0	0.0	0.0
70. Virginia, Minn.	0	0	0	0.0	0.0
71. Suffolk, Va.	0	0	0	0.0	0.0
72. Durant, Okla.	0	0	0	0.0	0.0
73. Hornell, N. Y.	0	0	0	0.0	0.0
74. Moscow, Idaho	0	0	0	0.0	0.0
75. Monmouth, Ill.	0	0	0	0.0	0.0
76. Brigham City, Utah	0	0	0	0.0	0.0
77. University Hts., Ohio	**0**	**1**	**1**	**0.0**	**0.0**
78. Du Bois, Pa.	**0**	**2**	**0**	**0.0**	**0.0**
79. Menominee, Mich.	0	0	1	0.0	0.0
80. Bel'font'ne Nbrs., Mo.	0	0	0	0.0	0.0
81. N. College Hill, Ohio	**0**	**1**	**0**	**0.0**	**0.0**
82. Bellaire, Ohio	0	0	1	0.0	0.0
83. Western Springs, Ill.	0	0	0	0.0	0.0
84. Amherst, Mass.	0	0	2	0.0	0.0
85. Mercedes, Tex.	**0**	**1**	**1**	**0.0**	**0.0**
86. Donora, Pa.	0	0	0	0.0	0.0
87. Pampa, Tex.	1	0	2	0.7	4.0
88. Covina, Calif.	1	0	1	0.7	5.0
89. Manhattan, Kan.	1	1	0	0.8	4.3
90. Corvallis, Ore.	1	0	1	0.9	4.8
91. Wheaton, Ill.	1	0	2	0.9	4.1
92. Xenia, Ohio	1	1	2	0.9	4.9
93. Plainview, Tex.	**1**	**5**	**0**	**0.9**	**5.3**
94. Borger, Tex.	**1**	**5**	**2**	**0.9**	**4.8**
95. Sedalia, Mo.	**1**	**3**	**0**	**0.9**	**4.2**
96. Robbinsdale, Minn.	1	0	3	0.9	6.1
97. Denison, Tex.	**1**	**2**	**3**	**0.9**	**4.4**
98. Benton Harbor, Mich.	1	1	2	0.9	5.2
99. Ottawa, Ill.	**1**	**2**	**2**	**0.9**	**5.2**
100. Aberdeen, S. D.	1	1	2	0.9	4.3
101. So. Portland, Maine	1	0	3	0.9	4.4
102. Texarkana, Ark.	**1**	**2**	**2**	**1.0**	**5.1**
103. Colton, Calif.	**1**	**2**	**4**	**1.0**	**5.3**
104. Fairborn, Ohio	**1**	**2**	**1**	**1.0**	**5.1**
105. Moorhead, Minn.	**1**	**2**	**2**	**1.0**	**4.4**
106. Chico, Calif.	1	1	3	1.0	6.8
107. Coffeyville, Kan.	1	0	2	1.0	5.7
108. So. Milwaukee, Wis.	**1**	**2**	**0**	**1.0**	**4.9**
109. Johnson City, N. Y.	1	0	1	1.0	5.2
110. Elmwood Park, Ill.	1	0	2	1.0	4.2
111. Huntington, Ind.	1	0	2	1.0	6.2
112. Marietta, Ohio	1	1	1	1.1	6.0
113. Connersville, Ind.	1	1	2	1.1	5.6
114. Streator, Ill.	1	0	0	1.1	5.9
115. Villa Park, Ill.	1	0	1	1.1	4.9
116. Morristown, N. J.	1	0	4	1.1	5.6
117. Caldwell, Idaho	**1**	**3**	**1**	**1.1**	**8.2**
118. Uniontown, Pa.	1	0	3	1.1	5.6
119. Coronado, Calif.	**1**	**6**	**7**	**1.1**	**5.6**
120. Antioch, Calif.	1	0	1	1.1	5.8
121. Redding, Calif.	1	0	1	1.2	7.8
122. Peru, Ind.	**1**	**3**	**0**	**1.2**	**6.9**
123. Meadville, Pa.	1	0	0	1.2	6.0
124. Fostoria, Ohio	1	0	0	1.2	6.4
125. Newton, Kan.	1	0	1	1.2	6.7
126. Snyder, Tex.	1	0	1	1.2	7.2
127. Collingswood, N. J.	**1**	**2**	**2**	**1.2**	**5.7**
128. La Grange, Ill.	1	0	0	1.2	6.5
129. Medford, Ore.	2	2	1	1.2	8.2
130. Stevens Point, Wis.	**1**	**2**	**0**	**1.2**	**5.6**
131. De Kalb, Ill.	**1**	**2**	**0**	**1.2**	**5.4**
132. Bellevue, Wash.	1	1	1	1.2	7.8
133. Marquette, Mich.	**1**	**2**	**0**	**1.2**	**5.1**
134. Prescott, Ariz.	1	0	1	1.2	7.8
135. New Bern, N. C.	1	1	3	1.2	6.4
136. Port Angeles, Wash.	1	0	0	1.2	7.9
137. Brainerd, Minn.	1	1	1	1.3	7.8
138. Garden City, Kan.	1	0	0	1.3	8.5
139. Mt. Vernon, Ill.	1	0	1	1.3	6.4
140. North Adams, Mass.	**1**	**2**	**0**	**1.3**	**5.0**
141. Shelton, Conn.	**1**	**2**	**5**	**1.3**	**5.5**
142. Lodi, Calif.	2	0	1	1.3	9.0
143. Vernon, Tex.	**1**	**2**	**3**	**1.4**	**8.3**
144. Walla Walla, Wash.	2	0	2	1.4	8.2
145. Marshfield, Wis.	**1**	**2**	**4**	**1.4**	**7.0**
146. Dalles, Ore.	**1**	**2**	**0**	**1.4**	**9.5**
147. Astoria, Ore.	**1**	**2**	**1**	**1.4**	**8.9**
148. Seaside, Calif.	1	1	1	1.4	5.2
149. Holland, Mich.	**2**	**3**	**2**	**1.4**	**8.1**
150. Hopewell, Va.	**1**	**2**	**1**	**1.4**	**5.6**
151. Atchison, Kan.	1	1	1	1.5	8.0
152. Hanford, Calif.	1	0	0	1.5	9.9
153. South Orange, N. J.	**1**	**2**	**2**	**1.5**	**6.2**
154. Mitchell, S. D.	**1**	**2**	**0**	**1.5**	**7.9**
155. Glendora, Calif.	**2**	**3**	**1**	**1.5**	**9.6**
156. Highland Park, Tex.	1	0	2	1.6	9.6
157. Kinston, N. C.	**2**	**4**	**1**	**1.6**	**8.1**
158. Bellefontaine, Ohio	1	0	0	1.6	8.8
159. La Porte, Ind.	2	1	3	1.6	9.4
160. Martinsburg, W. Va.	1	0	0	1.6	6.6
161. Cudahy, Wis.	1	0	1	1.6	5.6
All cities in this group				1.6	8.0
162. Renton, Wash.	2	1	1	1.7	10.8
163. Dyersburg, Tenn.	**1**	**3**	**1**	**1.7**	**8.0**
164. Central Falls, R. I.	1	1	0	1.7	5.0
165. Charles City, Iowa	1	1	1	1.7	10.0
166. Conneaut, Ohio	1	1	0	1.7	9.4
167. Rock Springs, Wyo.	**1**	**2**	**0**	**1.7**	**9.6**
168. Bemidji, Minn.	**1**	**2**	**1**	**1.7**	**10.0**
169. River Forest, Ill.	**1**	**4**	**0**	**1.7**	**7.9**
170. Ypsilanti, Mich.	2	2	1	1.7	9.5
171. Pittsburg, Calif.	2	0	0	1.7	10.5
172. Marinette, Wis.	**1**	**2**	**1**	**1.7**	**7.5**
173. Adrian, Mich.	2	0	1	1.8	9.9
174. River Rouge, Mich.	**1**	**3**	**1**	**1.8**	**5.5**
175. Tiffin, Ohio	2	2	1	1.8	9.3
176. Cadillac, Mich.	1	1	0	1.8	9.9
177. Winona, Minn.	2	0	2	1.8	8.0
178. Jeffersonville, Ind.	2	2	1	1.8	10.3

TRAFFIC DEATHS—STATE RECORDS

Deaths are reported by state traffic authorities.

All figures are preliminary. To insure proper comparisons, 1959 and 1958 figures cover the same reporting period as those for 1960.

Population Rate: U. S. population rate is the estimated annual number of deaths per 100,000 population, assuming that deaths for the rest of the year will follow the normal seasonal pattern. State population rate is the estimated annual number of deaths per 100,000 population, assuming that the monthly average of deaths will remain at the present average for the rest of the year. U. S. population rate is based on July 1, 1960 population estimate; state population rates are based on April 1, 1960 census, U. S. Bureau of the Census, Washington, D. C.

States shown in heavy type have improved in 1960 compared with 1959, or showed no change.

Mileage Rate: The number of deaths per 100 million vehicle miles of travel.

(Figures in parenthesis following the 1960 mileage rate indicate the number of months for which the mileage rate is calculated for each state.)

	Months Reported	Deaths Identical Periods 1960	1959	1958	% Change 1959 to 1960	1958 to 1960	1960 Pop. Rate	1960 Mile. Rate	
TOTAL									
U.S.	12	38,200	37,910	36,981	+ 1%	+ 3%	21.2	5.3	(12)
Ala.	12	855	821	851	+ 4%	+ 3%	26.2	6.8	(9)
Alaska	12	59	54	51	+ 15%	+ 26%	17.2	—	—
Ariz.	**12**	**508**	**514**	**506**	**— 1%**	**+ *%**	**39.0**	**7.9**	**(11)**
Ark.	**12**	**448**	**458**	**444**	**— 2%**	**+ 1%**	**25.1**	**6.2**	**(11)**
Calif.	12	3,705	3,585	3,502	+ 3%	+ 6%	25.6	5.3	(10)
Colo.	12	432	401	395	+ 8%	+ 9%	24.6	5.1	(8)
Conn.	12	270	248	251	+ 9%	+ 8%	10.6	2.7	(10)
Del.	12	86	82	83	+ 5%	+ 4%	19.3	3.7	(11)
D. of C.	12	71	61	62	+ 16%	+ 15%	9.3	3.1	(10)
Fla.	12	1,232	1,098	1,116	+ 12%	+ 10%	24.9	5.9	(9)
Ga.	12	1,033	978	942	+ 6%	+ 10%	26.2	6.2	(11)
Hawaii	11	108	85	—	+ 27%	—	18.6	—	—
Idaho	12	226	222	270	+ 2%	— 16%	33.9	7.3	(10)
Ill.	**12**	**1,705**	**1,765**	**1,875**	**— 3%**	**— 9%**	**16.9**	**4.2**	**(10)**
Ind.	12	1,122	1,119	1,048	+ *%	+ 7%	24.1	5.1	(11)
Iowa	**12**	**618**	**678**	**598**	**— 9%**	**+ 3%**	**22.4**	**4.3**	**(11)**
Kan.	**12**	**513**	**565**	**552**	**— 9%**	**— 7%**	**23.5**	**5.1**	**(10)**
Ky.	12	760	739	785	+ 3%	— 3%	25.0	6.8	(10)
La.	12	812	682	765	+ 19%	+ 6%	24.9	7.0	(11)
Maine	12	178	136	204	+ 31%	— 13%	18.4	4.2	(11)
Md.	**12**	**511**	**521**	**502**	**— 2%**	**+ 2%**	**16.5**	**4.5**	**(10)**
Mass.	12	578	557	587	+ 4%	— 2%	11.2	3.2	(11)
Mich.	12	1,545	1,440	1,334	+ 7%	+ 16%	19.7	4.8	(11)
Minn.	12	720	656	703	+ 10%	+ 2%	21.1	4.6	(10)
Miss.	12	618	549	547	+ 13%	+ 13%	28.4	7.7	(10)
Mo.	12	1,042	982	967	+ 6%	+ 8%	24.1	5.4	(10)
Mont.	**12**	**220**	**244**	**193**	**— 10%**	**+ 14%**	**32.6**	**6.4**	**(10)**
Neb.	**12**	**292**	**340**	**344**	**— 14%**	**— 15%**	**20.7**	**4.3**	**(11)**
Nev.	**12**	**165**	**180**	**142**	**— 8%**	**+ 16%**	**57.8**	**7.8**	**(6)**
N. H.	**12**	**104**	**122**	**100**	**— 15%**	**+ 4%**	**17.1**	**3.9**	**(11)**
N. J.	**12**	**741**	**762**	**754**	**— 3%**	**— 2%**	**12.2**	**2.9**	**(11)**
N. M.	**12**	**404**	**454**	**406**	**— 11%**	**— *%**	**42.5**	**7.5**	**(10)**
N. Y.	**12**	**2,031**	**2,222**	**2,117**	**— 9%**	**— 4%**	**12.1**	**4.1**	**(10)**
N. C.	12	1,208	1,186	1,078	+ 2%	+ 12%	26.5	6.4	(10)
N. D.	**12**	**156**	**163**	**154**	**— 4%**	**+ 1%**	**24.7**	**7.0**	**(11)**
Ohio	12	1,897	1,834	1,812	+ 3%	+ 5%	19.5	4.9	(10)
Okla.	12	656	659	662	+ 3%	— 1%	28.2	5.6	(10)
Ore.	**12**	**460**	**487**	**437**	**— 6%**	**+ 5%**	**26.0**	**5.6**	**(11)**
Pa.	11	1,496	1,496	1,512	0%	— 1%	14.4	4.1	(9)
R. I.	**12**	**58**	**90**	**74**	**— 36%**	**— 22%**	**6.7**	**2.0**	**(10)**
S. C.	12	702	678	610	+ 4%	+ 15%	29.5	7.6	(10)
S. D.	12	233	222	239	+ 5%	— 3%	34.2	7.0	(11)
Tenn.	12	787	770	718	+ 2%	+ 10%	21.5	5.6	(10)
Tex.	**12**	**2,235**	**2,439**	**2,296**	**— 8%**	**— 3%**	**23.3**	**4.8**	**(10)**
Utah	12	256	204	190	+ 25%	+ 35%	28.7	6.3	(9)
Vt.	12	102	89	77	+ 15%	+ 32%	26.2	6.1	(11)
Va.	**12**	**754**	**848**	**853**	**— 11%**	**—12 %**	**19.0**	**4.5**	**(11)**
Wash.	12	557	547	569	+ 2%	— 2%	19.5	4.8	(10)
W. Va.	12	**359**	**398**	**387**	**— 10%**	**— 7%**	**19.3**	**6.3**	**(10)**
Wis.	12	925	821	822	+ 13%	+ 13%	23.4	5.5	(10)
Wyo.	**12**	**167**	**169**	**137**	**— 1%**	**+ 22%**	**50.6**	**7.2**	**(11)**
P. R.‡	12	343	269	298	+ 28%	+ 15%	14.6	16.0	(8)
V. I.†	11	8	6	5	+ 33%	+ 60%	25.1	—	—
CANADIAN PROVINCES									
Alta.	11	296	236	275	+ 25%	+ 8%	27.8	—	—
B. C.	**10**	**242**	**262**	**218**	**— 8%**	**+ 11%**	**19.5**	**—**	**—**
Man.	**11**	**110**	**133**	**111**	**— 17%**	**— 1%**	**14.0**	**—**	**—**
Ont.	**10**	**931**	**949**	**903**	**— 2%**	**+ 3%**	**24.3**	**—**	**—**
Sask.	**12**	**154**	**160**	**134**	**— 4%**	**+ 15%**	**17.5**	**—**	**—**

*Less than .5%
‡Commonwealth of Puerto Rico
†Virgin Islands

	Twelve Months 1960	1959	1958	1960 Reg. Rate	1960 Pop. Rate
179. Sulphur, La.	1	1	0	1.8	8.8
180. Stoughton, Mass.	1	1	4	1.9	6.1
181. Cape Girardeau, Mo.	2	1	0	1.9	8.0
182. Glastonbury, Conn.	1	0	1	1.9	6.9
183. Maumee, Ohio	1	0	0	1.9	8.5
184. Ironwood, Mich.	1	0	0	1.9	9.7
185. Auburn, Mass.	1	1	1	1.9	7.1
186. Ponca City, Okla.	3	1	0	2.0	12.3
187. Napa, Calif.	3	0	2	2.0	15.5
188. Ada, Okla.	2	0	0	2.1	14.0
189. Evergreen Park, Ill.	2	0	2	2.1	8.3
190. Floral Park, N. Y.	2	0	0	2.1	11.4
191. Augusta, Maine	**2**	**3**	**6**	**2.1**	**9.2**
192. La Salle, Ill.	1	0	0	2.1	8.4
193. Ridgefield Pk., N. J.	1	0	0	2.1	7.9
194. Hillside, N. J.	2	0	1	2.2	9.0
195. Greenville, Tex.	**2**	**3**	**2**	**2.2**	**10.5**
196. Berkley, Mich.	2	2	1	2.2	8.6
197. Oswego, N. Y.	2	1	1	2.2	9.0
198. Woodland, Calif.	**2**	**3**	**0**	**2.2**	**14.8**
199. Livermore, Calif.	2	0	1	2.2	12.4
200. Wayne, Mich.	2	2	2	2.2	12.5
201. Greenwood, Miss.	2	1	0	2.3	9.8
202. Sterling, Ill.	2	1	1	2.3	12.7
203. Florence, S. C.	**3**	**7**	**1**	**2.3**	**12.1**
204. Brookfield, Ill.	2	0	1	2.4	9.8
205. East Moline, Ill.	2	2	1	2.4	12.0
206. Lexington, N. C.	2	0	6	2.4	12.4
207. Bristol, Va.	2	1	1	2.4	11.7
208. Defiance, Ohio	2	0	0	2.4	13.7
209. Goshen, Ind.	2	1	1	2.5	14.6
210. Boone, Iowa	2	2	0	2.5	16.0
211. Norfolk, Neb.	**2**	**5**	**1**	**2.5**	**15.3**
212. Wisconsin Rpds., Wis.	2	0	0	2.5	13.3
213. West Lafayette, Ind.	**2**	**3**	**1**	**2.7**	**15.7**
214. Monterey, Calif.	3	1	1	2.7	13.3
215. Griffin, Ga.	3	1	0	2.7	13.8
216. Cedar Falls, Iowa	3	2	0	2.8	14.2
217. San Fernando, Calif.	**3**	**4**	**1**	**2.8**	**18.6**
218. Warrensville Hts., Ohio	1	0	2	2.9	9.4
219. Escanaba, Mich.	2	1	0	2.9	13.0
220. Gardner, Mass.	2	1	2	2.9	10.5
221. St. Joseph, Mich.	2	0	0	3.0	16.9
222. North Olmsted, Ohio	2	0	1	3.0	12.3
223. Fremont, Ohio	3	1	0	3.0	17.0
224. Bell, Calif.	4	1	0	3.1	20.5
225. Henderson, N. C.	2	0	3	3.1	15.7
226. Stillwater, Okla.	3	0	3	3.1	12.5
227. Dover, Ohio	2	1	3	3.2	17.7
228. Owosso, Mich.	3	0	1	3.2	17.6
229. Circleville, Ohio	2	0	0	3.2	18.0
230. Red Wing, Minn.	2	0	1	3.3	19.0
231. Homewood, Ala.	2	1	2	3.3	9.9
232. Sumter, S. C.	4	4	3	3.3	17.3
233. Cambridge, Md.	2	0	1	3.3	16.4
234. Niles, Ohio	**3**	**5**	**0**	**3.5**	**15.4**
235. Westlake, Ohio	2	1	1	3.5	15.5
236. Two Rivers, Wis.	2	1	0	3.6	16.1
237. Monroe, N. C.	2	2	1	3.6	18.3
238. Ecorse, Mich.	2	0	0	3.6	11.6
239. Alpena, Mich.	**3**	**5**	**1**	**3.6**	**20.4**
240. Fort Thomas, Ky.	2	0	1	3.7	13.4
241. Rocky River, Ohio	3	1	1	3.7	16.6
242. Santa Paula, Calif.	3	0	3	3.7	22.6
243. Sault Ste. Marie, Mich.	3	2	2	3.8	16.0
244. Logan, Utah	3	1	3	3.9	16.0
245. La Grange Park, Ill.	3	0	0	4.0	21.7
246. Rye, N. Y.	3	1	1	4.0	21.1
247. Hurst, Tex.	2	1	0	4.0	19.6
248. Watertown, Wis.	3	1	1	4.1	21.6
249. Beacon, N. Y.	2	0	2	4.1	14.4
250. Brawley, Calif.	3	0	2	4.3	23.6
251. Klamath Falls, Ore.	5	2	0	4.4	29.6
252. Yuma, Ariz.	7	1	0	4.6	29.2
253. Ocala, Fla.	4	2	4	4.6	29.4
254. Monroe, Mich.	6	1	0	4.7	26.1
255. Windsor, Conn.	3	2	6	4.9	15.4
256. W. Springfield, Mass.	**5**	**6**	**6**	**5.0**	**20.1**
257. Milford, Mass.	3	1	1	5.6	19.1
258. Pompano Beach, Fla.	6	1	0	5.9	37.5
259. Rolling Meadows, Ill.	2	0	0	6.0	18.3
260. Fort Myers, Fla.	9	1	1	6.3	40.0
261. Webster, Mass.	3	0	0	6.3	21.9
262. Levelland, Tex.	4	0	3	6.4	39.2
263. Hays, Kan.	5	0	0	6.5	42.0
264. Lufkin, Tex.	7	1	2	6.5	39.8
265. Ashland, Wis.	3	0	1	7.0	29.7
266. North Chicago, Ill.	4	2	3	7.9	19.5
267. Brook Park, Ohio	5	1	0	9.2	38.8
268. Reidsville, N. C.	7	1	0	9.6	49.0
269. Farmington, Conn.	4	3	3	11.6	37.0
CANADIAN CITIES					
Vancouver, B. C.	30	29	36	—	7.5
Hamilton, Ont.	20	17	21	—	7.6
Toronto, Ont.	120	103	123	—	8.1
London, Ont.	9	11	6	—	8.8
Montreal, Que.	130	133	116	—	11.7

MOTOR VEHICLE DEATHS AND INJURIES BY STATES 1960 and 1959

Forty-five states and the District of Columbia have reported their death and injury experience for one to 11 months of 1960.

The table below shows all of the injury data reported by each state, but little information is available on precisely what injuries are included in each state's tabulation.

Differences in the ratio of injuries to deaths probably reflect primarily differences in the extent to which all injuries are reported. Other factors are undoubtedly involved, such as: (1) a few states omit some or all of the injuries in urban accidents; (2) there are large differences between states in the proportion of travel which is in urban area (the injury-death ratio for urban accidents is about four times the ratio for rural accidents).

The question of what injuries are being reported applies with equal force to the per cent change in injuries from 1959 to 1960. Any tightening up of police administration, any emphasis on "get all the injuries" is almost certain to bring about an increase in reported injuries, but probably only in minor ones. Similarly, instructions to "skip the scratches" probably would result in a decrease in recorded cases in many states. Introduction of financial responsibility laws has been observed to increase reported injuries sharply. Even the public's increased claims-consciousness is regarded by many people as an element in the growing number of injuries reported. With such factors operating to destroy comparability, indicated changes in the number of injuries should not be considered as reliable.

Months Reported	Deaths†† 1960	Deaths†† 1959	Injuries†† 1960	Injuries†† 1959	% Change 1959 to 1960 Deaths	% Change 1959 to 1960 Injuries	1960 Ratio of Injuries to Deaths
TOTAL U.S. **	27,650#	27,135#	1,203,472	1,143,081	+ 2#	+ 5	44
Ala. 11	785	734	4,578†	4,446†	+ 7	+ 3	6
Ariz. 10	404	414	10,767	8,479	— 2	+ 27	27
Ark. 11	408	426	4,379	3,313	— 4	+ 32	11
Calif. 10	3,030	2,864	125,481	116,816	+ 6	+ 7	41
Colo.							
Conn. 7	142	135	12,643	11,596	+ 5	+ 9	89
Del. 11	75	77	2,661	2,568	— 3	+ 4	35
D. of C. 11	67	55	7,124	7,176	+ 22	— 1	106
Fla. 11	1,091	978	41,243	37,079	+ 12	+ 11	38
Ga. 11	928	891	17,069	16,665	+ 4	+ 2	18
Idaho 10	197	180	4,335	4,505	+ 9	— 4	22
Ill. 10	1,362	1,438	85,553	83,762	— 5	+ 2	63
Ind. 5	391	388	14,129	13,252	+ 1	+ 7	36
Iowa							
Kan. 7	273	326	8,854	8,811	— 16	+ *	32
Ky. 10	615	610	13,154	12,985	+ 1	+ 1	21
La. 11	723	599	7,672†	8,003†	+ 21	— 4	11
Maine 11	160	127	6,768	6,081	+ 26	+ 11	42
Md. 9	395	397	18,339	15,372	— 1	+ 19	46
Mass. 8	366	348	67,719	60,047	+ 5	+ 13	185
Mich. 11	1,389	1,288	79,161	56,820	+ 8	+ 39	57
Minn. 11	658	581	28,284	25,643	+ 13	+ 10	43
Miss. 11	570	483	7,700	6,766	+ 18	+ 14	14
Mo. 11	933	890	12,274	11,235	+ 5	+ 9	13
Mont. 9	164	177	2,946	2,257	— 7	+ 31	18
Neb. 11	268	306	10,402	9,668	— 12	+ 8	39
Nev.							
N. H. 11	89	111	5,819	5,559	— 20	+ 5	65
N. J. 8	488	470	46,892	43,628	+ 4	+ 7	96
N. M. 10	325	377	5,099	4,548	— 14	+ 12	16
N. Y. 10	1,644	1,769	222,653	224,140	— 7	— 1	135
N. C. 10	970	950	21,762	20,129	+ 2	+ 8	22
N. D. 11	143	158	2,884	2,716	— 9	+ 6	20
Ohio 11	1,744	1,651	72,342	68,734	+ 6	+ 5	41
Okla. 1	41	41	1,308	1,190	0	+ 10	32
Ore. 9	322	353	13,149	14,172	— 9	— 7	41
Pa. 8	1,059	1,005	56,404	58,612	+ 5	— 4	53
R. I. 5	22	31	3,885	3,484	— 29	+ 12	177
S. C. 11	628	597	10,891	9,223	+ 5	+ 18	17
S. D. 4	43	54	957	—	— 20	—	22
Tenn. 10	658	608	17,586	14,017	+ 8	+ 25	27
Tex. 11	2,020	2,192	53,668	66,520	— 8	— 19	27
Utah 8	162	124	5,603	3,865	+ 31	+ 45	35
Vt. 11	92	79	2,679	2,931	+ 16	— 9	29
Va. 10	606	684	21,979	21,337	— 11	+ 3	36
Wash. 10	469	430	24,104	23,980	+ 9	+ 1	51
W. Va. 11	336	374	6,779	7,313	— 10	— 7	20
Wis. 5	284	264	11,765	11,561	+ 8	+ 2	41
Wyo. 11	154	155	2,986	2,077	— 1	+ 44	19
P. R.‡ 10	287	206	10,190	9,783	+ 39	+ 4	36
V. I.¶ 11	8	6	171	152	+ 33	+ 13	21

†Rural injuries only.

††All figures are preliminary. To insure proper comparisons, 1959 figures cover the same reporting as those for 1960.

*Less than .5%.

**Death and injury totals cover reports for all months indicated in this column.

#Death totals and changes differ from national figures because those shown here are based on the states and months for which injury data are reported.

‡Commonwealth of Puerto Rico.

¶Virgin Islands.

Safety Library

From Page 4

by Richard M. Michaels. *Public Roads*, December, 1960, pp. 109-113, 124.

(The design and data in this study developed by Traffic Institute of Northwestern University with Bureau of Public Roads and Wisconsin State Highway Patrol.)

Using the tools at hand for traffic improvement. Vern L. Hill. *Pacific Northwest Law Enforcement News*, November-December, 1960, pp. 31-33, 54-55.

(Address before Eighth Oregon Traffic Court Conference.)

Engineering

Fifth International Study Week in Traffic Engineering. Alger F. Malo. *Traffic Engineering*, December, 1960, pp. 32-33, 36.

Films

"Debbie's Safety Lesson" — color-sound motion picture for pre-school children. Produced for the California Traffic Safety Foundation. *The California Highway Patrolman*, December, 1960, p. 23.

Foreign Countries

Britain's New Ross Motorway. Pat Gregory. *Better Roads*, December, 1960, pp. 20-21, 30.

Toronto signal project opened to inspection. *Traffic Engineering*, December, 1960, p. 40.

Grade crossings

Ohio uses prismo at RR-Xings. *Traffic Engineering*, December, 1960, p. 45.

Highways

Britain's New Ross Motorway. Pat Gregory. *Better Roads*, December, 1960, pp. 29-21, 30.

Driver requirements in freeway entrance ramp design. Charles Pinnell. *Traffic Engineering*, December, 1960, pp. 11-17, 54.

Functions of the division of highways in operating the highway plant. California Division of Highways report. *Traffic Engineering*, December, 1960, p. 39.

Improving freeway traffic accident reporting. B. F. K. Mullins. *Traffic Engineering*, December, 1960, pp. 25-26, 28-31, 54.

Indiana pacesetter. Daviess County, Ind. puts its road system in hands of a civil engineer. *Better Roads*, December, 1960, pp. 13-16, 30-31.

Progress on the Interstate System—A Bureau of Public Roads Map, as of Sept. 30, 1960. *Highway Highlights*, November-December, 1960, pp. 16-17.

Threatening slide area scalped with water jet. *Roads and Streets*, December, 1960, pp. 82-83.

Inventory of Traffic Safety Activities

The traffic sarety inventory and your city. Douglas J. Carmody. *Street Engineering*, December, 1960, pp. 16-17.

Lighting

Street lighting job only begun, conference delegates told. *Street Engineering*, December, 1960, pp. 18-19, 38.

Litterbugging

Litterbugging: the penalties and the remedies. *Better Roads*, December, 1960, pp. 17-19, 27.

Maintenance of Fleets

Shop-built tools up efficiency. *Fleet Owner*, December, 1960, pp. 70-75.

Programs

Look at the new Kalamazoo! *Journal of American Insurance*, January 1961, pp. 1-4.

Radio

Mobile radio today. *Fleet Owner*, December, 1960, pp. 61-68. (Highlights of a special eight-page report, prepared by Leo G. Sands.)

Seat belts

Doctors say seat belts could have saved 10,000. *The California Highway Patrolman*, December, 1960, p. 53.

Shopping Centers

Characteristics of travel to a regional

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shopping center. By the division of highway planning, Bureau of Public Roads. Reported by Jacob Silver and Walter G. Hansen. *Public Roads*, December, 1960, pp. 101-108.

Traffic

As the National Safety Council sees it. *Highway Traffic*, December, 1960, p. 16.

Will you act for safety? Nils A. Lofgren. *Pacific Northwest Law Enforcement News*, November-December, 1960, pp. 60-66. (Address before Governor's Safety Conference, Olympia, Wash.)

Traffic control

Air patrol provides "down to earth" answers. *Wisconsin Traffic Safety Reporter*, December, 1960, p. 2.

New sign manual approved; to be available soon. *Traffic Engineering*, December, 1960, p. 38.

New York to try electronic control. *Traffic Engineering*, December, 1960, pp. 42, 44.

Pretimed and traffic actuated controllers. Benjamin W. McKay. *Municipal Signal Engineer*, November-December, 1960, pp. 9-10, 12.

Radio signal control tested in NYC. Punch cards select signal programs under new electronic hookup which covers a four mile segment. *Street Engineering*, December, 1960, pp. 9, 21.

Symbology on the highways of the world. William G. Eliot, III. *Traffic Engineering*, December, 1960, pp. 18-24.

Time switch for traffic signal controllers. *Traffic Engineering*, December, 1960, p. 44.

Traffic flow

"Traffic pacing" system to be tried in Michigan. *Traffic Engineering*, December, 1960, p. 40.

Traffic volume

Appraisal of O-D survey sample size. By the division of highway planning, Bureau of Public Roads. Reported by Arthur B. Sosslau and Glenn E. Brokke. *Public Roads*, December, 1960, pp. 114-119.

ADDRESSES OF MAGAZINES MENTIONED

Better Roads
173 W. Madison St.
Chicago, Ill.

California Highway Patrolman
1213 H St.
Sacramento 3, Calif.

Changing Times
1927 H St., N. W.
Washington 6, D. C.

Chicago Traffic Safety Review
20 N. Wacker Drive
Chicago 6, Ill.

Consumer Bulletin
Consumer's Research, Inc.
Washington, N. J.

Fleet Owner
330 W. 42nd St.
New York, N. Y.

Turn Page

Circle Item No. 4—Reader Service Card

IAC Sounding Board
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Sketch shows the Rudmose Sound Analyzer checking muffler.

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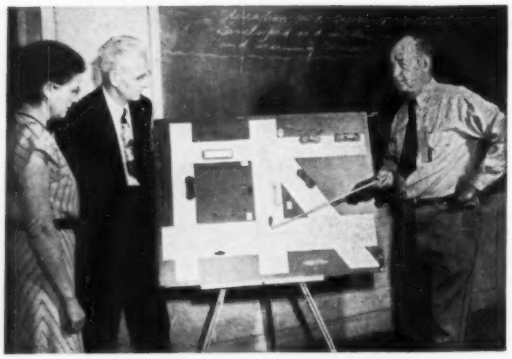

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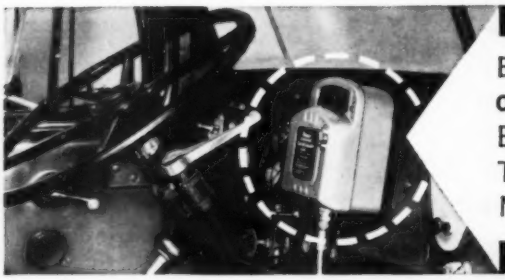

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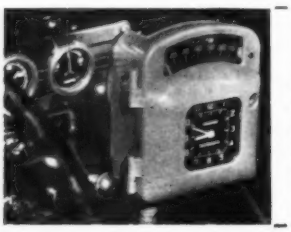

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Highway Highlights
National Press Bldg.
Washington 4, D. C.

Highway Traffic Magazine
601-3 Republic Bldg.
Louisville 2, Ky.

Journal of American Insurance
20 N. Wacker Drive
Chicago 6, Ill.

Municipal Signal Engineer
130 W. 42nd St.
New York 36, N. Y.

Notre Dame Lawyer
South Bend, Ind.

Pacific Northwest Law Enforcement News
1009 S. W. Fifth Ave.
Portland, Ore.

Popular Science Monthly
353 Fourth Ave.
New York 10, N. Y.

Public Roads
U. S. Bureau of Public Roads
Washington, D. C.

Roads and Streets
22 W. Maple St.
Chicago 10, Ill.

Street Engineering
22 W. Maple St.
Chicago 10, Ill.

Taxicab Industry/Auto Rental News
200 W. 57th St.
New York 19, N. Y.

Traffic Digest and Review
1804 Hinman Ave.
Evanston, Ill.

Traffic Engineering
2029 K St., N. W.
Washington 6, D. C.

Wisconsin Traffic Safety Reporter
State Division
Motor Vehicle Dept.
Madison 2, Wis.

News from Capitol Hill

From Page 28

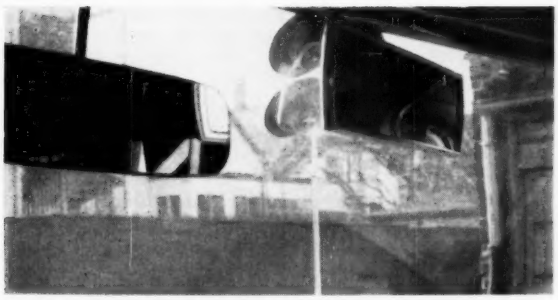
The U. S. Bureau of Public Roads has given official concurrence to the newly approved national standards for traffic signs, signals and markings contained in the revised edition of the Manual on Uniform Traffic Control Devices. Federal highway legislation provides that signs, signals and markings on highways constructed by federal funds are subject to state approval, with federal concurrence designed to promote safe and efficient highway use. The bureau announced its approvals will be only for devices conforming to the new Manual.

To Page 50

NEW... SAFETY EQUIPMENT

Publication of product announcements in this section should not be construed as endorsement or approval by the National Safety Council.

Auxiliary Rear-View Mirror



This new auxiliary rear-view mirror has been designed by the manufacturer for use on the passenger side of any automobile. The mirror has undergone considerable testing in two-man police cars with very satisfactory results. When in use by the passenger-officer it is found he can often catch a glance of a situation worthy of investigation. Often an arrestee is directed to follow the police vehicle to local headquarters, at which time this mirror enables the passenger-officer to keep the arrestee within his sight at all times. This frees the driver-officer of this responsibility. This mirror is also valuable in the field of driver education. With a student at the wheel, this mirror enables the instructor to maintain a constant observance of all traffic to the rear of the training vehicle. The mirror is attached to the windshield by means of three small suction cups, the design of which keeps the mirror firm and positively attached until such time removal is required, and this takes but seconds.

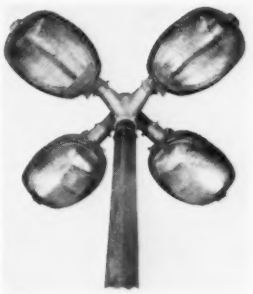
Lake Automotive Products Co., 531 Woodbine, Oak Park, Illinois (Item 41)

Increase Effectiveness of Traffic Cones

This transistorized warning light has a unique theft-proof feature in a 30-inch steel chain attached to the battery case cap. When the unit is placed in a traffic cone, the chain hasp is ramset to the pavement, making the cone and flasher theft-proof. A flag staff socket is welded to the head permitting use of a warning flag for daytime effectiveness. Available with either red or amber lenses, the flasher produces 8 beam candlepower. Signal life is 400 hours, using four ordinary "D" flashlight batteries. A push switch on the side of the circuit housing turns the flasher on and off, without having to remove it from the traffic cone.

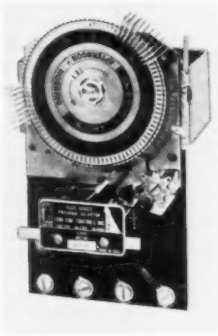
R. E. Dietz Co., 225 Wilkinson Street, Syracuse, N. Y. (Item 42)

Multiple Luminaire



An inexpensive, multiple luminaire designed for area lighting of parking lots and malls. Its reflector and glassware combine high-intensity, glare-free illumination with maximum utilization of light. Light distribution pattern approximates a square. Offered in two models, No. 5452 uses 400-watt mercury lamps. With the luminaire composed of a die-cast aluminum housing, polished reflector in combination with a pressed crystal refractor. No. 5453 will accommodate a 100, 175, or 250-watt mercury lamp. Each luminaire has an aluminum die-cast fitter attached to an aluminum reflector and a heat resistant molded prismatic refractor.

Revere Electric Mfg. Co., 7420 Lehigh Ave., Chicago 48, Illinois (Item 43)



Traffic Signal Time Switch

Developed expressly for traffic signal controllers, this one-dial/three-circuit time switch is said to assure greater safety and accuracy by eliminating the danger of the wrong controller being energized (due to improper synchronization) when two or more time switches are used. Field installation is also said to be simpler and more accurate with a savings in space and cost over the old conventional multiple time switch set up. Called the Model #8077SK, the manufacturer claims the unit's mounting plates fit the standard mounting switch holes on all makes of traffic controllers, thus eliminating the need for alterations when replacing old equipment.

Tork Time Controls, Inc., Mount Vernon, N. Y. (Item 44)

SAFETY PRODUCT LITERATURE

School Zone Marker Sign

Features of this new school sign unit are a rugged ¾" x ¾" x ⅛" angle iron framework and simple folding for easy carrying. Overall width of the unit is 18¾". A black on white "Speed Limit" sign measuring 18" x 24" hangs from the framework while a black on yellow "School" sign is attached to the top of the frame. This "School" sign is available in either a baked enamel or fluorescent finish. Signs may be double faced or single faced and are made of 16 gauge aluminized steel. Standard Signs, Inc., 3190 E. 65th Street, Cleveland 27, Ohio.

For more details circle No. 81 on enclosed return postal card.

Skid Control

Designed and manufactured by Highway Safety Appliances, Skidmaster is a detachable grit spreader for use on passenger cars. Consisting of two canvas grit bags which are clamped to the rear fenders, a discharge tube leading to the tires, and a hose running to the windshield-wiper line or vacuum spark advance. There are no holes to drill and no electrical connections to make. Through the use of a vacuum release valve, a pushbutton control on the dashboard instantly releases a flow of grit or sand under both rear wheels. Hithway Safety Appliances, a division of Napco Industries, Inc., Minneapolis, Minn.

For more details circle No. 82 on enclosed return postal card.

Traffic Lane Marking System

Designed to provide nighttime and bad weather visibility, Lite-Lane Traffic Guide Systems are available in a complete package including reflective, contoured markers, a high strength epoxy type adhesive for marker-to-pavement bonding, and a semi-automatic application system which is said to insure maximum in-place life and greatest economy. The low-profile marker contains a uniform dispersion of reflective glass beads throughout which provides brilliance when exposed to vehicle lights. As the grinding action of tires wears it down, new beads continually are exposed to maintain original reflectivity year after year. American-Marietta Co., 3400 13th Avenue S.W., Seattle 4, Wash.

For more details circle No. 83 on enclosed return postal card.

Safety Brake System

Developed by the Kelsey-Hayes Co., 3600 Military Ave., Detroit 32, Michigan, this system was designed to provide safe, dependable air power brakes for school busses and trucks having hydraulic brake systems. Three-way safety is provided. 1. If rear hydraulic line or wheel cylinder fails, you still have full front brakes with their own power assist. 2. If front hydraulic line or wheel cylinder fails, you still have full rear brakes with their own power assist. 3. If air supply should fail, you still have direct mechanical actuation of full hydraulic rear brakes.

For more details circle No. 84 on enclosed return postal card.

Turn Signal Control

Designed for use on school busses, this turn signal can be instantly converted into a four-way flashing warning if vehicle is stalled. In ordinary operation the signals are controlled by a "L" and a "R" button. In an emergency both buttons are pushed, activating all four signals to flash a roadside distress. K-D Lamp Co.

For more details circle No. 85 on enclosed return postal card.

Heavy Duty Wheel Balancer

Truck tires in sizes up to 1100-22 can be handled easily by this wheel balancer which features automatic loading. Balanced wheels will reduce wear, reduce vibration, and reduce driver fatigue. Monarch Mfg. Co., 1218 Santa Fe Avenue, Berkeley 6, California.

For more details circle No. 86 on enclosed return postal card.

Photoelectric Lighting Control

New photoelectric light controls by Revere Electric Mfg. Co. are light-sensitive switches which automatically turn on outdoor lighting installations such as street lights at predetermined levels of darkness and turn them off when they are no longer needed. Encased in a weatherproof, shock resistant housing, the control operates through a temperature range from —40 F. to 165 F. Revere Electric Mfg. Co., 7420 Lehigh Ave., Chicago 48, Illinois.

For more details circle No. 87 on enclosed return postal card.

Clearance Marker Light

These aluminum armored clearance marker light incorporate two 2-candlepower Triple-Life bulbs. Rated at 1500 hours, these bulbs are said to deliver three times the service life of ordinary bulbs now in use. The filaments are double supported against shock and vibration for longer bulb life. The heavy duty armored aluminum body is cast with a center bar for added lens protection. Extra "on the road" safety is assured by the use of two bulbs. If one burns out, the other stays safely lighted. R. E. Dietz Co., 225 Wilkinson Street, Syracuse 1, N. Y.

For more details circle No. 88 on enclosed return postal card.

Vehicle Identification Signs

Designed to increase the safety of the small bus and driver education car. This school bus sign is mounted to the roof of the vehicle and features two double-faced lamps with red or amber lens. A two-way dash mounted switch permits driver to flash lamps when brakes are applied or continuously. The student driver signs are also roof mounted but without the lamps. The baked enamel sign panels are lettered in black, on either white or school bus yellow background. Lake Automotive Products Co., 531 North Woodbine Ave., Oak Park, Illinois.

For more details circle No. 89 on enclosed return postal card.

School Safety Patrol Equipment

Give your patrol member a sense of responsibility and pride. With standard equipment, the school safety patrol member is recognized by school children and motorists alike, assuring their respect and cooperation. Catalog with complete information and prices are available. Graubard's, 236 High Street, Newark 2, N. J.

For more details circle No. 90 on enclosed return postal card.

Driver Education

This visual aid, consisting of three interchangeable sections 14" x 22" each, enables driver instructors to simulate various intersections for class room instruction. With the use of scale model vehicles and traffic equipment, countless traffic situations can be simulated. Sales Aid Co., 354 Nassau St., Princeton, N. J.

For more details circle No. 91 on enclosed return postal card.

Police Motorcycles

Literature is available on the 1961 line of police motorcycles manufactured by Harley-Davidson, Milwaukee 1, Wis. The speedy, maneuverable Police Solo is an ideal pursuit vehicle for apprehending traffic violators and criminals. For business and residential patrols, checking meters, routing traffic, the Servi-Car does the job.

For more details circle No. 92 on enclosed return postal card.

Auto Safety Belts

Reduce the high cost of auto accidents with auto safety belts. Besides reducing the obvious expenses of salaries to employees injured and unable to work and the cost of training replacements, the use of safety belts in your company cars helps keep your insurance rates down, prevents loss of company time and production, and reduces attorney fees and other costs. Literature and demonstration material is available. Beam's Manufacturing Co., 13th and North Robinson, Oklahoma City, Oklahoma.

For more details circle No. 93 on enclosed return postal card.

MSU Trains Specialists

From Page 21

spent a large portion of his time in California. In all cases the students are encouraged to study traffic in states where they hope to live and work.

In blazing the field training trail for undergraduates, Bruce Madsen spent time observing operations of traffic agencies in Milwaukee, Chicago, Columbus, Cleveland, Washington, D. C., New York and Hartford, Conn., in addition to the Michigan cities of Detroit; Flint; Kalamazoo; Lansing, the state capital; and East Lansing, home of Michigan State University.

There is, however, the unfortunate fact of financial limitations upon this important training. The student must travel and live at his own expense and unless he is beneficiary of a too-rare scholarship or grant-in-aid, plans must be integrated with his budget as well as with his educational needs.

A field training pattern is set up under which a student may observe the various aspects of traffic control and safety programs in several localities, averaging 10 to 12 days in each. Included is one or more organizations of the type with which he hopes to be associated, and which he must study thoroughly.

The variety in this field training can be illustrated by the organizations in southeastern Michigan which are cooperating with the training program.

In Detroit, the traffic administration student is sent for guidance to staff members of the Traffic Safety Association, a privately financed organization which maintains close working relationships with official agencies.

He spends time with the police department—in the traffic director's office, the accident prevention bureau, the motor and stationary traffic bureaus, the safety bureau, the police laboratory and record centers and with officers on the motor beats.

He follows cases through the traffic courts from the issuance of the ticket to the assessment of penalty against the violator and the handling of case records. He studies with the traffic engineer and his staff in their offices; goes with crews on the installation or inspection of controls; becomes familiar with the municipal parking authority activities. He attends driver education classes in high schools and child safety sessions in the elementary schools.

During this period he also studies the TSA itself, as it serves as an intermediary between official traffic agencies and the people of Detroit.

In Detroit, the student also spends time in the great automobile companies, with their engineers, their safety men and at their proving grounds. He gains first-hand knowledge of the strides made in building safety into the vehicle and also of the research in automobile laboratories and on the proving grounds to build a generation of safer drivers and of safer highways.

Other field training is available to the student within easy distance of his own campus. The East Lansing and Lansing police departments, both with fine standings among cities of their sizes, and the Lansing Safety Council, a civic organization with professional staff, participate in the training program. Headquarters of the Michigan State Police is within walking distance from the campus.

In Lansing, the Michigan Department of Education, the Michigan State Highway Department and the secretary of state's office, with its vehicle, licensing and driver improvement departments, are all open to the traffic administration student.

Wherever the traffic administration student takes his field training, certain standards are maintained.

The organization, public or private, national or local, must be one recognized for the excellence of its aims and procedures.

And the student is usually allowed into the inner councils of the organization as if he were a ranking member of it.

Because his job will involve close cooperation with people from all levels of business, professional and social life, the student must possess the ability to work well with others.

This comes under consideration the day he seeks enrollment in the highway traffic administration program. As with all students, his academic potential is studied. But he is also screened in terms of social conscience—his interests, his ability to get on with peo-

To Page 50

TAKING CHANCES WITH YOUR STUDENTS . . . INSURE THEIR SAFETY WITH A WELL EQUIPPED SAFETY PATROL

Graubard's Equipment is nationally known as the school safety equipment "That Promotes Safety." It does this by fulfilling both of the conditions essential to a really effective Safety Patrol.

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A Study of Impact

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the sample as a whole, we can say that if the guess (to a certain extent) is a reflection of the level of concern on the part of the guesser, most people underestimate the accident problem.

(Respondents were also asked to estimate the annual death toll of polio. Most of the sample *greatly overestimated* the actual toll, perhaps indicating the effectiveness of polio propaganda.)

Implications of the Results of the Study for Safety Propaganda in General

This is the first nationwide, in-depth study of safety propaganda ever made. One study does not make a solution, any more than a swallow makes a summer, but it does suggest certain approaches to safety propaganda.

There is an immense amount of safety propaganda being conducted in this country. It is being conducted by many people and organizations. The approaches are many and varied and often contradictory. They are sometimes carried out with little thought or understanding as to the effect they have on people: the production of the material is sometimes an end in itself. But what is happening on the receiving end?

There is almost a total absence of any kind of systematized approach. Some will argue that propaganda is an art, not a science, and that people who have a "feeling" for such things should be the propagandists, not social scientists. This may be true. But the argument here is that regardless of who is doing the propagandizing, we ought to make an attempt to determine if our propaganda is effective, if it is influencing attitudes and conduct, if it is making better drivers of people—and if not, why not.

The present study was such an attempt.

What did we learn from it?

Did it give us some ideas, some notions, which, if otherwise reasonable, might be helpful in designing our propaganda until more definitive studies are made?

Let's start with this premise: In terms of our goals (better drivers, fewer accidents), *the worst kind of current safety propaganda is that propaganda which results only in raising anxiety levels.* Typically this involves "scare" propaganda *with no other message.* A good example of this type of propaganda is a totally demolished car placed in the village square with a sign reading, "Don't Let This Happen To You!" (which is like saying, "Don't Be Nervous.") We find similar examples in newspapers, magazines, on car cards, and on radio and television. If you succeed only in raising anxieties, in making people tense and nervous, it is possible that there will be more accidents rather than fewer.

Does this mean there should be no "scare" propaganda? Not necessarily. The "scare" label is sometimes put on anything that makes people somewhat uncomfortable. As we have seen, people tend to underestimate the traffic safety problem; their estimates of the yearly fatality toll reflect this attitude.

People should be made aware that there is a *problem*, that a great number of people *are* injured in cars, that a great number of people *are* killed each year. This was emphasized in the *CBS Reports'* program "The Great Holiday Massacre." *But* there is awesome evidence in the study that the retained effect of the "scare" propaganda in the program (and there was considerable) was negligible. Why?

Because the induced anxiety was released by attributing the unpleasant business of automobile accidents—cause and involvement—to anti-social characters (in this case, for the most part, the two drunks). It was no longer a problem for the viewer; it was no longer his concern.

Speed and teenagers can be the scapegoats in the same way. A number of people in the safety movement have urged for a long time that we

Traffic Safety Index

The index to volume 57, Nos. 1-6, July 1960—December 1960, is now available free from the National Safety Council Library, 425 N. Michigan Ave., Chicago 11.

get away from these scapegoats that allow people to "get off the hook," and talk to the average driver.

It could be argued that we ought to utilize these scapegoats, to try to get people off the hook, and thus reduce the general anxiety level of the population. If drivers in the population were less anxious, less tense, we might have, in general, better drivers.

This argument will be rejected out of hand by some. Some of us are not willing to let people get off the hook no matter what good it does. This is a highly emotional reaction. But we are not going to solve our accident problems with our emotions; it's enough of a task for our brains.

There *is* some merit to this argument. It is quite possible that a scapegoat approach of this kind would reduce accidents to some extent. But just as in our personal lives, attributing problems to external causes is, in the long run, not the realistic way to deal with them. Nor are the solutions as complete or satisfying. We solve problems by facing them and dealing with them realistically. A scapegoat approach, then, has some limitations.

People only reach for scapegoats when scapegoats will satisfy a need. The viewers in the study felt a need to relieve their anxiety, an anxiety induced by the "scare" propaganda in the program. The problem is to satisfy that need by having people reach for something that will both satisfy it and *make them better drivers.* It should be pointed out that they wouldn't be reaching at all if it had not been for the "scare" propaganda. (By "scare" propaganda, we mean propaganda that realistically deals with the fact that thousands of people are killed each year in automobile accidents.)

People do not look for ways to deal with problems that do not sufficiently involve them. Safety propaganda must first make people aware of the gravity of the problem in terms of themselves. Safety propaganda must simultaneously give people realistic ways to deal with the problem (which has become the individual's problem).

The study indicates that the old shibboleths

Be Careful
Obey Traffic Rules
Help Police Enforce Traffic Laws

are so culturally ingrained that little more than lip service is paid to them. What seems to be called for are highly specific messages which will help — and which the individual *believes* will help—the driver to deal with his problem.

A driver will tell you that he should be careful. But does he know how to be careful? He will tell you he should obey traffic rules. But does he know what they are? He will tell you that traffic laws must be enforced. But does he see the individual laws in terms of himself?

An accident is an extremely complex event: over-simplification results in caricature. In the CBS program, the two drunks were so drunk that — as representative of the kind of people who get in accidents—they were completely foreign to the viewer. The viewer feels he is not that kind of person, and therefore is not the kind of person who gets into an accident. It's not his problem!

The message should have been: normal people in normal situations get involved in accidents, but you needn't be involved if you do these (specific) things (e.g., the techniques of defensive driving).

To summarize what we have learned from the study: In order to get people to pay attention, safety propaganda must realistically state the problem in terms of deaths and injuries. Having done that, it should not create scapegoats (drunks, speed, teenagers, etc.), nor should it rely on generalized slogans, but rather deal in specific messages that explicitly help the normal individual to be a better driver. STOP

A Prayer for Safety

O God by whose wisdom and power the universe is governed, grant that through the merits of Thy Divine Son, we Thy children may be imbued with that spirit of justice and charity which will cause us in all things to seek the safety and welfare of our brethren, this we ask through Jesus Christ our Lord.

(By Lawrence J. Shehan, D.D. Bishop of Bridgeport)

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MSU Trains Specialists

From Page 47

ple, and so on. Additional tests and interviews are used to measure the presence of those qualities considered to be most valuable in this line of endeavor.

While this article has been largely devoted to the training of undergraduates, it should also be noted that graduate studies in traffic administration are also provided under the supervision of the School of Police Administration, again with the cooperation of the Highway Traffic Safety Center. These studies are available to graduates who have obtained their earlier degrees in other academic areas.

In three cases, outstanding graduate students have been aided by fellowships granted by the Automotive Safety Foundation.

Just a word about the Highway Traffic Safety Center, itself, which since its inception in 1956 has been involved in many of Michigan's traffic safety efforts. In addition to staff participation in the undergraduate and graduate programs described here, the center also arranges seminars and conferences for those already in traffic safety work. These include not only police, teachers and engineers but other interested persons, such as city planners, judges and safety organization leaders.

Center staff specialists engage in research and experiments in all areas of traffic, from highway controls to driver motivations. Other staff members provide field assistance to local and state agencies, both official and civic.

Finally, the center provides an information and materials service—acting as a clearing house for new developments or findings; publishing results of the more significant research; providing films, literature and other training materials, and initiating television and radio programs on traffic matters.

The essence of Michigan State University's approach to traffic safety is to focus the appropriate knowledge and skills available within the entire University upon the traffic problem in an effort to make the state and the nation a better and safer place in which to live.

News from Capitol Hill

From Page 44

The Department of Commerce announced a proposed rule change which would double the permissible square footage of three classes of signs on the interstate and defense highways.

Commercial Transportation

The chief of I.C.C.'s section of motor carrier safety, Ernest G. Cox, said that investigation of truck accidents and a nation-wide program of roadside spot checks confirm the need for better maintenance practices. An appraisal of four years of such roadside inspections was that "the total result . . . cannot be deemed a satisfactory condition." Among the major items noted were defects with braking systems, steering equipment, coupling devices, springs, tires and electrical equipment. As a result, the I.C.C. was testing "systematic maintenance procedures."

In a recent motor carrier accident investigation report dealing with defective brakes in violation of I.C.C.'s regulations, the commission stressed the importance of a statutory requirement that private carriers identify themselves to the I.C.C., and stated it would recommend to Congress appropriate legislative action. The report says: "Education of private carriers through administrative and enforcement methods appears to be the most satisfactory means for improving the safety of such operations."

At present motor transportation of explosives and other dangerous articles is controlled by the Transportation of Explosives Act for common carriers by motor vehicle, and by the Interstate Commerce Act for contract and private motor carriers. The I.C.C. announced its intention to bring the contract and private motor carriers under the Transportation of Explosives Act, which provides heavier penalties for violations.

The Food and Drug Administration's investigation of illegal sales of amphetamine pills, popularly known as "bennies," to truck drivers, has resulted in the development of over 55 court cases during 1960. Federal Courts have imposed heavy penalties in some such cases.

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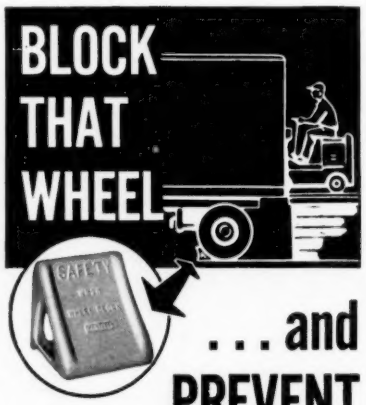

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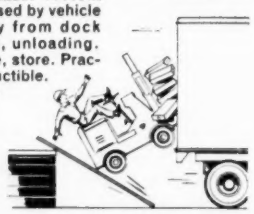

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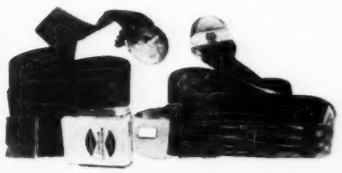

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BOOKLET	An 8-page booklet that illustrates the five main rules of safe backing. It contains schematic drawings to illustrate each point and brief case histories of actual backing accidents taken from the files of the National Safety Council. Printed in two colors, page size 3¾" x 8".
POSTERS	Six colorful posters that once again repeat and reinforce the ideas viewed in the movie. One large poster (17"x23") sets the campaign theme and 5 other posters (8½"x 11½") deal with the 5 basic rules of safe backing.
DASH STICKERS	Add a touch of humor to the campaign and once again illustrate the important points of safe backing. These little billboards are used in the driver's cab of the vehicle to keep him reminded of the campaign while on the road.

Now . . . you can pinpoint a vigorous campaign against the irritating and costly backing accident. The NSC backing accident campaign is designed for a six-week period and can be conducted within the framework of your regular planned fleet accident prevention program. It focuses attention and interest on this single area of safety; providing the "know-how" on how to stop backing accidents. The film, "*LOOK, STOP BACKING ACCIDENTS*," is used to spark the campaign and is then followed and supported by intensive use of the other campaign materials.

You can obtain complete information on this special interest campaign by sending for a new folder that describes all the available materials, lists prices and suggests campaign procedure.

SEND FOR YOUR FREE FOLDER NOW!

GREEN CROSS FOR SAFETY
NATIONAL SAFETY COUNCIL

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